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IMMORTAL LIFE: "THE SHADOW OF DEATH INTO THE MORNING."

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ON this Easter morning we are met to keep our tryst with memory and our beloved dead. The gracious, hallowed Christmas time is more loved by childhood and youth, but the Easter Day is dear above all other high days to mature and thoughtful minds. The patriot, the scholar or the merchant, who has invested much treasure in his generation, and has climbed to the top of the hill, knows that he must soon make the great Adventure, and therefore ponders long and wistfully the arguments for the future life. Only when deeply moved do they break their silence, and challenge their doubts, as did Tennyson, when the fountains of the great deep were broken up by the death of Hallam; as did Browning after the death of his closest friend, and of Elizabeth Barrett, twin poet of the soul. On the morning of the day when Socrates was to drink the cup of poison, he said to his disciples, "As I am going to another place it is meet for me to be thinking and talking of the pilgrimage which I am about to make, but I would ask you to be thinking of the truth, and not of Socrates. Agree with me if I seem to you to be speaking the truth; or, if not, withstand me might and main, that I may not deceive you as well as myself, in my enthusiasm." Now life's first duty is to stand like a faithful sentry at one's post, to love the truth supremely, to pursue the truth eternally, and to abide by that truth. Perhaps in no realm is truth more important than where it touches the realities of God and the immortalities of the soul. The astronomer knows mathematical certainty, and computes the eclipse to a second, as does the merchant the weight of coal and iron. But mathematical certainty has no place in the moral, affectional and spiritual life. No one can prove to a mathematical certainty that Socrates ever lived or died. The oldest manuscript of Plato is not earlier than the sixth century A.D., and the scholar must take a leap of a thousand years back to Plato, and take Socrates on faith, just as he leaps seven hundred years in the oldest manuscript back to the death of Caesar.

For the resurrection is an event better attested than the assassination of Caesar or the poisoning of Socrates. What a flood of light is cast on the life and times of Jesus by the new discoveries of our scholars! Witness the epitaphs on the tombs, the frescoes newly uncovered, the thousands of new papyri, the Greek cities uncovered on the banks of the Sea of Galilee. Think of a papyrus of the time of Jesus, with a proposition of a merchant to a teacher for a two years' course of instruction in shorthand for his son! There are men in this audience who recall the inauguration of Lincoln fifty years ago, and the assassination of the President forty-six years ago last week, but within forty-six years after the death of Jesus, Paul and the apostles had told the story of the resurrection in the great cities of three continents, and bannered the known world with Christ's emblem. Jurists tell us that the simplest explanation is always the truest. The simplest explanation of Decoration Day is Antietam and Appomattox; the simplest explanation of the Fourth of July is Independence Hall and a Declaration; the simplest explanation of Forefathers Day is Plymouth Rock and the Mayflower; and the simplest explanation of the unbroken continuity of the Easter celebra-

tion is some tremendous event. A cable account of Sir Oliver Lodge's address before a scientific society in London only last week, quotes the scientist as saying: "There is nothing in our present day theory of evolution that precludes such an event as the resurrection of Jesus; the event must be accredited like other events." The higher law always sets aside the lower law; vegetable law sets aside mineral law, and there is growth; animal law sets aside vegetable law, and there is nutrition; mental law sets aside the physical law and the blood is consumed by thought and emotion, and the law of life, outbreaking life, sets aside the law of death. "All my purposes are broken off," exclaims Job—broken off here, but the ambition thwarted and the plan defeated shall be taken up and fulfilled beyond. For physical death is a little episode, not worth noticing in the career of a Son of God, who has the life immortal because God His Father is eternal also.

The Pathos of the Easter Morning.—Now in the realm of nature the shock is partly from the seed, and partly from the sun and soil. All ripened, helpful thoughts also are born partly out of the seed truth of immortality and partly out of the atmosphere made warm and rich by affection for your beloved dead. What a company of pilgrims have passed away from us, so silently, that we have scarce heard the rustle of a wing. And yet, the voice is silent, the step is still, and we are living in an altered world that will never be the same again. The sea is always exhaling its whitest mists to the God of summer, and our church and city are always sending their whitest souls heavenward. But yesterday, and the news from Fort Sumter electrified the land. Our great generals—where are they? Where also our statesmen, and orators, and poets, who inspired us during the war epoch. Gone, our revered fathers and mothers! Gone, too, the companions of our way, with whom we took sweet counsel! Out of the chill of winter, out of the storm and tumult of passion, out of all the thunder of life's battle, they have gone into the unstormed land. These graves under the feet are all silent, and looking up at the stars, one lies awake and watching Death go on and on, extinguishing star after star. Dying seems so unnecessary, and death so irrational, in a world like ours.

Travelers speak of live trees that entered upon their careers twenty centuries ago; John Muir thinks the oldest redwood tree in California was young when Romulus and Remus perchance laid the foundations of Rome. Why should man not live two thousand years? Man's sinew and bone are steel, over against the feeble strength of the redwood bough and the olive branch. Why does man's human mechanism of thought and love wear out, and the delicate machine come to a sudden stop? No father sends his son to the university, and on commencement day puts a bullet through the boy's heart to interrupt his unfulfilled career. But many a youth standing at the threshold of life's temple turns, smiles bravely, waves a signal, and lo, the signal is "all hail, and farewell!" Just at the happiest, sweetest hour of the day, the noble statesman, the beautiful mother and the little child fall into the dreamless sleep. No grave ever should be straight; graves should be twisted into interrogation points. No man ever fulfilled his career. "Life is too short," whispered the dying poet. Life is too short for the inventor, dropping his tool; for the lawyer, turning sadly from his desk; for the reformer, looking wistfully toward the poor whom he would help. "Too short,"—the career will be for us all. For each one must soon turn away and leave his work and pass on, not knowing that invisible messengers gather up the seed, complete the study, perfect the powers, complete the task.

Death the One Thing Necessary to Social and Individual Progress.—There is one reflection that rebukes man's antagonism to dying, and that is the fact that but for death there could be no liberty, no progress and no civilization. Nothing could be more terrible for ambitious youth than the thought that there is no room for service, no opportunity for recognition, no reward for true merit. Three score summers and winters pile up influence, gold and offices. If a great man lived a thousand years, he would overshadow cities and states, and eclipse all young souls. Think of a billionaire living a thousand years! Why he would own the solid earth, and have a mortgage on the golden sun and the silver moon. One dollar saved and put out at compound interest, and doubled every ten years, would make him own all the wealth in the United States, before the man's career was half done. Even as things are, with men living to eighty, young men must hope much from the kindly offices of death. Think of a statesman and politician living a thousand years! Why, the man would build up a machine that would be a veritable Juggernaut, and rolling down the banks of the Hudson it would crush the reforms of every ambitious boy, planning better things for his city and state.

Think of even the noblest poet and essayist living a thousand years! Why, with his knowledge, with his acquaintance with every man who was worth knowing, and his

first-hand information upon all events, the great man would overshadow all, until the young poet or novelist would have no chance to grow, would starve to death for want of support. The husbandman understands this principle. He plants his trees in the nursery, but when the pear tree is three or four years old, and its boughs begin to overshadow the seeds in the furrow, he transplants the big tree, and puts it in a wide space on the hillside by itself, where it can have room and sun. Robert Louis Stevenson must have been grateful to God that Shakspeare had been transplanted, so as to give him a chance. Now, this is the whole philosophy of human life. It is a nursery for the starting of young trees, while the large ones are constantly transplanted that they may ripen their clusters on the far-off hillsides of the eternal summer land. The young soul needs room. The new plant must not be overshadowed by the giant tree. There must be sun, and light, and hope, for germinal growths. This means progress for the individual and growth for society. When the great souls die they can go into competition with Gabriel and Raphael, and leave the youth to match his strength with the strength of another youth, new and untried. Thence come hope, development, initiative, self-sacrifice, martyrdoms, and greatness in the hero's children. A great man is cut down like a green tree—death destroys not the tree, but transplants it to richer soil and better fruitage.

The Prophetic Note in Instinct.—Every year brings some new contribution, and raises up new allies for every great truth. The past year has brought a new meaning to the instinct of the immortal life. We distinguish between an intuition for immortality and the instinct of immortality. An intuition is universal and necessary. Witness the intuition of space that is endless, and of time that is without measure. But the instinct of immortality has not self-evidence, necessity and universality. Hitherto this instinct has been conceived of as fossilized history. A flake of anthracite is really condensed fern and flower. The instinct in a bee is the fossilized memory of a thousand generations of honey bees. The bird reared in the rushes of Hudson Bay had no experience to guide it when the September sky is clouded and the chill creeps into the air, but the young bird has the ancestral instinct, and finds its way through the pathless air, lone wandering, but not lost, toward the tropic land, where the sun always falls on orange trees. But suddenly men have studied the instinct of immortality from another angle.

To-day it is not the historic side, but the prophetic side of instinct has gripped men's attention. Yesterday, when the fog fell on the city, you stood in the center of Brooklyn's Bridge. Turning backward, your eyes followed the cables until you were startled to discover that you could not see the pier on which they rested. You were suspended in midair, and, looking backward, the pier was enveloped in mist, like the history of this instinct of immortality. But walking forward, you must have noticed that the pier before you was also hidden by the same mist, but the cables that held the travellers up were supported at both ends on foundations of certainty. It is not the history of instinct alone that should be considered; it is the prophetic note that deserves careful analysis. No butterfly ever followed instinct and was deceived thereby. God keeps His word with the sparrow, with the robin and the plover. Will He break His word with His children, made in His own image? Does nature speak truth and not lies to the wild fowl, winging its way southward? But when man stands with adoring thoughts under the midnight sky, crying out, "My Father, my Father!" is there no response from that Divine One who stands behind the star fires? No bosom upon which the soul can lean in the hour when it goes down into the valley and shadow? No voice that will whisper, "Let not your heart be troubled," in the time when the fog chokes the throat, and the mists shut the pilgrim in?

I go to prove my soul,
I see my way as birds their trackless way.
I shall arrive! What time, what circuit first,
I ask not; but unless God sends His hail,
Or blinding fire balls, sleet or stifling snow,
In good time, His good time, I shall arrive.
He guides me and the birds, in His good time.
For where I listen, music, and where I tend,
Bliss forever.

A Transient Body and Permanent Soul.—Modern science, from the viewpoint of biology, has thrown new light on the soul's survival of bodily death. That crude idea that the body secretes thought as the liver bile, has become ludicrous. There is an eel whose body is a storage battery, slowly storing electricity. When the eel's body is crushed it stores no new electric charge. But modern science has come to believe that the relation between the soul and the body is that between the musician and his harp, which was Socrates' simile. Instead of the body being rebuilt once in seven years, so far as the instrument of thought is concerned, it may be practically rebuilt once in seven weeks. Indeed, many particles of it, in times of intense mental excitement, may be worn out by almost daily intense emotions and fiery excitements. A writer on

nervous diseases speaks of the consumption of a pint of red blood in twenty-four hours. From the layman's viewpoint this may seem like an exaggeration; but one thing is certain—while man may rebuild his skeleton once in seven years, and therefore have ten bodies during this period, he may have had a hundred different brains, and yet the "I" remains permanent, in the midst of the transient and ever-changing "Mine." Man is not a body, but a soul that uses a body as an instrument, with a thousand delicate strings. Sixty years have come and gone for some of you, and you have had many, many different harps built and worn away, and yet the "I" remains "I."

Closing your eyes, Memory waves her wand, and in a moment you see the great house in the orchard, the group of old oaks, hard by, the little academy hidden amidst the trees; the old school desks carved with the jackknife literature of a boy's life; you hear the tumultuous shouts of the boys at their games, you go down the old path to the little stream that oft sang to your sighing; you wander idly again through the forest when the nuts are ripe, and suddenly, the scene changes, and you see your sister's face, lying cold and white midst her funeral flowers. Then the throat fills, and the scene is veiled in a mist of tears! Strange! passing strange! for the eyes of five and seventy are new eyes, freshly built—these eyes never saw those far-off scenes these ear drums never heard your mother's voice —it was your memory that with a golden thread binds together these thoughts of love, these dreams, these prayers, into the bundle named life. And having survived so many bodily changes, surely the soul will survive the greatest change of all. The flower falls, but the new fruit survives and grows. The body falls, but the soul lives on. The gifted youth who went away with his task half done, shall take up his song, his canvas, his tool, and work on under better and more friendly surroundings. The millions of men who have been defeated in their ambitions, and have gone, unfulfilled prophecies to the grave, shall take up their task anew, and find themselves, and be a source of pride to themselves and all who love them. The purposes broken off here, the loves here unfulfilled, the aims unaccomplished, the plans thwarted for a time or defeated now shall be successful and rewarded there. Let us believe that the life that is incomplete on earth is to be fully rounded out in heaven, for the innumerable millions whose whole career was a march to defeat and heartbreak on earth, but also learn the explanation of their hard problems in heaven.

Immortality Rests in God's Purpose.—We conclude, therefore, from these arguments, that the life immortal rests back upon the plan and purpose and nature of God. Our Heavenly Father is a God, not of the dead, ruling over graveyards and skeletons, but a God of the living, who stretches out his scepter over a great multitude of noble souls, the heroes, the martyrs, the patriots, the poets, all who have lived loyal to their convictions and died true to their ideals. With them he is working out a kingdom of righteousness and joy, in a city more beautiful than we can ever conceive. Death cannot defeat God's plans, the all-powerful God is fully equal to the problem of death. Having made man to live seventy years, He can continue what He has already begun, and carried forward for so many summers and winters. Let us remember that immortality does not consist of an argument completed, but in a hope begun. Having lifted the soul to a level where it can dream of immortality, the next step will be the overtaking of the ideal, and the grasp upon the reality. For what the poets dreamed or mused upon, Christ possessed. What philosophers tried to prove, Christ simply published. Because man was made in God's image, Jesus had only to reveal man's immortality—He did not create it. What you are building, therefore, is your own life immortal. Men talk about oblivion for the works of genius. Well—the leaves fall, during a thousand autumns—that is little, because the tree lives on. The author writes his books and they pass into oblivion, the author lives on. The artist paints his canvases, and time destroys them, the artist has built himself and he lives on. The architect's building goes to dust, but not the architect who has built a soul. All the works of man's hands are journeying toward nothingness and decay, but man, the worker, abides forever. When then doubt comes, and you hear a voice: "Believe no more

> That tumblest in the godless deep,
> A warmth within the breast should melt
> The freezing reason, colder heart,
> And like a man in wrath the heart
> Stands up and answers, "I have felt."

"AS HE SAID."

TO us the resurrection of Christ seems the most wonderful event in history; a sudden vision of a great peak rising into perpetual sunshine, seen once by the eyes of men when, for a moment, the clouds parted. To us it is a miraculous occurrence which stands out solitary in the long record of time. To the heavenly guardians of the tomb it was only the manifestation to men of an event as universal as birth.

To the Christ it was a passing incident for which he made preparation as quietly as for a night of sleep; to him the morning which shines for us with a glory beyond the reach of speech came as normally as other mornings have come since the beginning of time, and he rose and laid aside the garments in which he had slept as quietly as we put aside the clothes of the night and go forth to the work and joy of the day.

His whole life and teaching had predicted the issue of that experience with death; the inexhaustible tide of life which poured in upon the world with his coming could no more have been arrested by the change we call death than the sea rushing landward in a fathomless flood of many waters can be held back by a wall of sand. That tide swept through and past the barrier with the tremendous sweep of an elemental power for which obstacles do not exist. Concerned with the giving of life, charging the very borders of his garments with vitality, healing with a touch, calling back the dead with a word, death was for the Christ but a passing shadow on the landscape of the world. To men it was a dense and awful mystery; to him it was a momentary clouding of the sun, powerless to destroy or even to obscure. When he spoke of it, his voice had no deeper note than when he spoke of the toils and sorrows of the human state; his tones were far less grave than when he spoke of the sins that imperiled the soul. Being what he was, his resurrection was inevitable; every word and deed predicted it. On the first great Easter morning, when the faithful women found the stone rolled away, and entered the tomb, two men in shining raiment stood by them and said to them: "Why seek ye the living among the dead? He is not here, but is risen, as he said; and they remembered his words."

He had said it to them a thousand times in as many languages as there are forms of expression. Every work of healing was a disclosure of immortality; every quiet talk with the little company of disciples and every discourse with the multitude proclaimed it; the spirit that radiated from him like light in a dark place, like warmth in a cold world, was charged with deathless life; his wonderful personality, so deeply set in the history of the world and yet so far above its passion and blindness and evil, so intimately in the homes of men and yet so intimately at home with God, proclaimed the immortal life with such an eloquence of prophecy and majesty of evidence that his resurrection became as much a matter of course as his power of service, his divine habit of love.

He did not promise the resurrection and the life; he was the resurrection and the life. The decisive witness to immortality is not the resurrection, which was the physical manifestation of a universal fact; the compelling testimony to the reality of the unbroken and indestructible life of the spirit was the Christ himself. His mighty works were not the miracles on which faith builds its invisible peace; he was himself the miracle on which the faith of humanity rests on a foundation more massive than the round world itself.

He rose on the third day, "as he said," but the prediction was not made in words only or chiefly; it was not the promise but the revelation of the nature of the soul, not the promise of a great experience to come but of a life that now is. His whole life was prophetic; again and again the clouds parted and the immortality he was shone in the eyes of men; he shed the light of that immortality on every home he entered, on every path he walked. Through the midst of mortal fears and sickness and anguish and death he moved, touched with all sorrow, weighed with the awful sense of sin around him, tender and compassionate at every tomb; and yet serene, immovable, undismayed; wearing his immortality like an invisible garment until he stood revealed in it that first Easter morning.—*The Outlook.*

MARK TWAIN'S DAUGHTER.

IN Harper's Magazine is printed the last thing that Mark Twain wrote—a touching and beautiful tribute to his daughter, Jean, who died just one year ago. It was written on the day of her death. He says:

"Jean's dog has been wandering about the grounds today, comradeless and forlorn. I have seen him from the windows. She got him from Germany. He has tall ears and looks exactly like a wolf. He was educated in Germany, and knows no language but the German. Jean gave him no orders save in that tongue. And so, when the burglar alarm made a fierce clamor at midnight a fortnight ago, the butler, who is French and knows no German, tried in vain to interest the dog in the supposed burglar. Jean wrote me, to Bermuda, about the incident. It was the last letter I was ever to receive from her bright head and her competent hand. The dog will not be neglected.

"There was never a kinder heart than Jean's. From her childhood up she always spent the most of her allowance on charities of one kind and another. After she became secretary and had her income doubled she spent her money upon these

things with a free hand. Mine, too, I am glad and grateful to say.

"She was a loyal friend to all animals, and she loved them all, birds, beasts and everything—even snakes—an inheritance from me. She knew all the birds; she was high up in that lore. She became a member of various humane societies when she was still a little girl—both here and abroad—and she remained an active member to the last. She founded two or three societies for the protection of animals, here and in Europe.

"She was an embarrassing secretary, for she fished my correspondence out of the waste-basket and answered the letters. She thought all letters deserved the courtesy of an answer. Her mother brought her up in that kindly error."

MAKING MELODY IN THE HEART.

Music has not only a soothing power over the mind, but its effects upon the body, through the mind, are sure to be positively remedial. When Saul the king was tortured by evil thoughts, and the passion of his soul was so intense that he lost all control of himself, the strains of David's harp charmed him to quietness and peace. Many times the nerves of a tired invalid have been soothed by a sweet melody, when words would have struck the ear harshly; and on the tide of devotional singing, souls have often been floated over the bar into the harbor of rest in Jesus. Singing to one's self a hymn of praise or of simple trust often breaks the power of temptation, drives away clouds of doubt and lightens the burdened spirit. Perhaps we have not the gift of vocal song, but every heart can make melody if it will. The effort to do so when we feel least like it is remedial. One who had been a long time in spiritual darkness, and had come to that fearful state where, though a Christian for many years, he could not be persuaded that his soul was not in danger of eternal death, said: "I pray and pray and pray; most of my time I spend in prayer, but it does no good." "Perhaps," said his friend, "you pray too much. Try praising God for all His mercies and for His love to us in the gift of Jesus, and see if that does not bring the light." It was wise advice. Let every gloomy and despondent soul try it. We have so many pressing needs in this life of painful vicissitudes that, if we have the blessed habit of talking with God, our Father, about all our affairs, as it is our privilege to do, we are apt to spend most of our time in telling Him our griefs and pleading for help in our necessities. We are told to do this "in everything," but at the same time to have in our hearts the melody of thanksgiving. When we have called upon Him in the day of trouble, when we have rolled our burden upon Him, let us stop for a while our importunate asking, and praise Him for the gifts and grace already given. Let us say, "My heart is resting, O my God; I will give thanks and sing."

The little child may lead us so that we may learn to bear up bravely under pain and disappointment, submitting quietly to the great and good Physician's treatment of our case, "singing and making melody in our hearts to the Lord."

EIGHT YEARS AFTERWARD.

IN a New England manufacturing town lived Phyllis Carpenter, the daughter of a prominent and prosperous man. Living in a home of culture and wealth, she made wise use of her advantages, both for herself and others. For years she taught in the Sunday school, and in time found her special mission in a class of boys from the mill district.

They were a rough lot, but to her were gentlemen, first and always. Having been accustomed in her home to mothing but the kindness and courtesy that belong to gentlefolk, she used the same manner and maintained the same attitude toward these rough boys that she would have assumed toward her own intimate friends.

Into this Bible class she put her whole heart. For the sake of those boys she visited, wrote letters, devised entertainments, and gave up no small fraction of her time. When one of them was absent she looked him up, and if he were sick or in trouble she found and assisted him. The boys grew to young men, and Miss Carpenter's class became a recognized institution.

The time came when she had to give it up. Her father first, and then her mother, grew ill, and for seven years her home durties were so exacting that she could no longer teach.

She often wondered about the fruit of her years of work. She heard from her boys now and then. They were widely scattered. Some of them were doing well, and others not. But she had no means of knowing whether, on the whole, she had done much permanent good.

After the death of both her parents she gave up her old home for smaller quarters, and before leaving it gave a series of "at homes" to different groups of her friends. And it occurred to her to gather her old Bible class for an evening together.

She was able to find thirty-two of them, widely scattered. Of these twenty-six

came together, and sat down to dinner with her.

Some still worked in the mill, two had been in prison, some had been unfortunate; but as a whole they were a fine lot of men. A number had studied at Young Men's Christian Association night-schools, or taken other educational courses, and were in positions of trust and honor. One of them had a salary of six thousand dollars and a position of importance. And he took back with him two men of the class who were out of employment,—including one who had been in prison,—and promised to set them on their feet.

The evening was full of revelations of what the Bible class had done for its members. It had not succeeded in every case in making a prosperous or useful man; but even when it had failed the failure was not hopeless, and the reunion offered new possibilities of success; and in several cases it had proved the life inspiration of boys who were now strong and effective men.

In one night came back the rich reward of years of toil. And when Miss Carpenter lay down that night she thanked God, and said, "This is the happiest hour of my life."

MANUAL TRAINING.

THE Manual Training Round Table met on Wednesday, December 28th, at 10 a.m. in the Assembly Room of the Board of Trade, Mr. Bert M. Le Seur, of Union City, in the chair. Miss Iris Prouty, of Millersville State Normal School, was secretary and has kindly made this report of proceedings. After some brief opening words of welcome by President Le Seur, "The Manual Arts as Taught in the Pennsylvania Normal Schools" was announced as the first subject on the program.

MANUAL ARTS IN PENNSYLVANIA NORMAL SCHOOLS.

Miss Jean R. McElhaney read an interesting paper from which the following is taken representing the work at the Normal School at Indiana, Pa.:

In the normal schools of Pennsylvania, the drawing precedes the so-called Manual Training and is studied for two terms of the junior year. In the Indiana school the first drawing, so called because it is taught first during the year, is devoted largely to nature work; while the second drawing, given during the winter term, is more in the line of mechanical work. In both, the work is given from the standpoint of the teacher. Throughout the course a note-book is kept in which are recorded, each day, the date, the lesson of the day, and any hints in its presentation that might be helpful to the student in future teaching.

The first two weeks are given to the discussion of the best materials for public school work, proper care of these materials, passing of the same in class, care necessary at the close of the term, and proper habits of children, with note of the tendencies and results.

Construction—A pencil case is planned in class, made at home, (often the first piece of hand-sewing ever done by the student) and with the required contents brought in for inspection at the specified time. Near the close of the term, all the drawings are arranged for a book and enclosed in a cover, lined, bound in cloth, and decorated with an original design by the owner.

Representation—Steps are given in plant-sketching, each step being illustrated by the teacher and later expressed by the students. Care is taken to secure good placing, quality of line, observation and expression of the characteristics of the different plants, the name of each, and occasionally some quotation or legend. During the lesson, suggestions and criticisms are given as far as time permits. The criticisms are very general at first but apply more to detail and technique, as the practice continues. Occasionally, the entire class (forty-two) is brought forward and seated rather compactly, that each one may see and hear; while the packet of drawings, one day's work is shown, one paper at a time and criticised. In this way, each student sees his own paper in comparison with the best. The result of such a lesson is satisfaction founded on understanding, on the part of the students, and marked improvement in the next papers. The drawings are made from specimens furnished by the teacher, carefully selected and simplified. Later, some students always ask to go along for specimens, and occasionally a few from the teachers' class go along and bring the plants ready for use. At first each student is provided with a specimen, until he is trained to see and express with some degree of truthfulness. (Three fourths of our students never had a drawing or color lesson.) Later, a spray is usually rendered in pencil one day, and on a new sheet, without preliminary sketch, in water color the second day. Seed pods, fruits, and vegetables are followed by landscape, in six or seven simple steps. Care is observed in proportion, margins, color of mounts, and in signature as to placing and printing.

History and Decoration—Two or three artists with their works are studied each term. Special days are observed somewhat by special work, often in construction, with suggestions for the different grades; free brush illustration for Hallow'en; fruits, vegetables, and place cards for Thanksgiving. For Christmas many suggestions are made and one is carried out, in addition to a piece of illuminating, often a card designed by some member of the class. A design is originated by each student, from his own drawings and applied to the cover before mentioned. This book and the note-book are held for the State Board examination.

In second drawing, two paper type forms are constructed, from which each student experiments, notes, and formulates the principles of perspective. These are applied to still life and finally, a piece of still life with appropri-

ate decoration is designed. One object is studied for composition and rendered in six different ways.

Color—Scales of the primaries with their complements are made, and stained glass windows. A few lessons on pose and animals follow.

Free-hand printing is next taken up with the different methods of spacing for the different grades; a text sheet with the decoration planned and executed; pencil painting applied to landscape and still life, taught; and another book cover made.

With the additional term in the senior year, it will probably be best to relieve the juniors of the professional aspect which many are too young and immature to fully grasp and appreciate; and combine this with the teaching in the practice school, for the seniors. This must certainly be productive of *good*, as it will require every senior to take the work. As it is now, many get credit for work done in high schools, and so, do most wretched teaching in the practice school. To still further advance our work, let us:

1. As Manual Arts teachers, be more united in our work, which without the Art, is crude, unpurified, and unleavened: without the manual, theoretical and unreal, "Useless, each without the other." Not "more matter with less art," but "more matter with much more Art."

2. Keep in mind the criticism resulting from international comparisons—"Americans cannot draw correctly or well." Let us learn to appreciate and derive pleasure from the plain every-day work of "*drawing*"; and be not led away from it by variations, entertainment, and gew gaws—"frills."

3. Keep in mind the criticism from national comparisons—"We need to have more unity and conformity."

4. Be happy in our work, teaching others to be the same; if happy, better; if better, helping to make a better nation.

Miss Iris Prouty spoke for the Normal School at Millersville. She said:

Manual Training at Millersville is classed as a Middler study. It may be taken in two terms, one period every day, or in three terms, one period every other day. At present the subject covers a certain amount of elementary handwork with either sewing or shopwork.

1. Elementary handwork, or Elementary Manual Training, is required of all students for one half the given time. Under this head we teach (*a*) Paper and cardboard work, which is taught as dictation in the making of books, boxes, etc., and as freehand illustrative work. It is a form of manual training which can be taught in the regular room by the regular teacher. Large classes can be handled; it is adaptable to all grades; the cost of the equipment and maintenance is small and it has considerable industrial value. (*b*) Reed and Raffia work covers the weaving of reed baskets with varying number of spokes and weaves, braiding of raffia and the three common stitches in sewed baskets, introducing color in the form of design. The possibilities of native material are considered in order to show that basketry can be taught where there is no money for purchasing reed and raffia. This form of handwork can also be taught by the regular teacher in the regular class room. It is not adapted to the lowest grades and the class unit should not be too large. The cost of maintenance is considerably more than paper work, but the cost of equipment is very small. (*c*) A small amount of weaving is taught for its industrial value. No patent looms are used, only such as can be made in the class room.

2. Sewing is required of all grades for twenty weeks. The equipment for this work is purposely kept so as to be possible for schools with limited means. Our class unit is forty and the individual equipments cost about thirty cents. These forty equipments can be used over and over by as many sections as is necessary. Ours have been in use for four years with very little replacement. The sewing course is the only place where we do exercises. I always state emphatically that this is not a desirable way to teach children, but with our limited time this method covers more ground with less strain for the student. These stitches are taught: Running, basting, gathering, over-casting, hemming, over-sewing, buttonholes, darning and patching. One undergarment is made for the application of the stitches learned. There is also some required reading on textile fibers and processes of manufacture.

3. Shopwork is required of all boys as a parallel course to the sewing. Mechanical drawing I do not teach, neither can I say that we make our working drawings. Expensive instruments and much time and practise are necessary for this subject. Otherwise careless and incorrect methods are used which are a positive detriment. We block out a rough drawing of our first two projects, in order that thereafter the boys may at least look at a blue-print intelligently, with some idea of the relation of different views and dimension lines. For our required reading, we use Government Bulletins. This is not only for the knowledge of material but to acquaint the student with these as a source of information. Four projects or models are required of each student. The first is a pole for the butterfly-net which will later be used in the biology class. This teaches getting out stock, squaring up, boring, planing to the round. The second is a box with nailed butt-joints and a hinged cover. Shape and size as planned by the student to meet his own needs. The third article made is for the working out of curved angles with curved-saw drawknife, spoke-shave and chisel. A choice of several things is given. The fourth and last depends on the ability and ambition of the pupil, with certain restrictions—that it must have joints of some kind, and that it must not be of such size that details will be slighted in order to get it done. While every boy cannot make all the joints, as each new joint is taught it is demonstrated to the entire class. Emphasis is placed on good stain of artistic color and dull wax finish.

4. Practice Teaching—Manual training is taught in all grades of our Model School.

Every senior teaches there for one period every day in the school year, having a different subject and grade assigned for each term. Thanks to the intelligent interest of the principal of the Model School, manual training has equal rank with all subjects taught. This is a plain statement of what we are doing for our students in this subject.

I believe that, for better results, the manual training in our normal schools must be compulsory and on the same footing as other subjects in the curriculum. The course of the different schools should be more uniform with certain definite requirements. At present, it is too much what the individual teacher makes it. While eventually the normals will have to meet the broader demands of Industrial Education, I believe that for the next few years, at least, our best work will be along the lines of elementary manual training.

Our students are going out to country schools or else to be grade teachers. The manual training which they teach will be only what their ambition and ingenuity lead them to organize, or what they are required to do under the direction of the supervisor of that subject. It will be work which can be carried on in their own school room. We will give something worth while to these teachers, if we teach them to make their hand-work broad in the sense of co-operating with other subjects; make them familiar with many materials and many processes, in order that lack of available knowledge may not hinder the carrying out of their projects. Add to this, if you can, something as intangible as the Manual Training Spirit, and the realization that the life and vitality of their teaching depends on a broad knowledge which comes not only from technical but general reading. Then our manual training will cease to be busy work and become the foundation of bigger things.

Miss Iris F. McClaymonds spoke for the Slippery Rock State Normal School as follows:

The manual arts are recognized in the Slippery Rock Normal as an essential part of the student's equipment for his work. Our aim has been to prepare those who complete our course to take up intelligently any form of hand work which may be required in any grade below the high school; and also to give to each one a thorough training in one branch of manual work suited to his development. Through the work done in the various grades in the Model School we bring before the students the actual work with children. Here for one term in the year, the period which in the other terms is used for instruction in drawing, is given to manual work. Beginning in the first grades with paper folding and cutting, we carry the work on through the paper construction, cardboard wrapping, raffia and yarn weaving, and basketry to whittling and sewing in the higher grades. With the normal students this work is taken up in the spring term of the Junior year as part of the instruction in methods. In this class each student as far as possible, works out at least one problem in each line of work, general instructions are given to all, and then the class is divided into groups and each group takes up one subject carrying it as far as possible. When through with work a description is written giving careful directions as to the method of construction. After the group work is done, the results in the various groups are brought together before the entire class and discussed and criticised. Careful notes are then made on all the work.

In the regular work the student in the middle year is required to take two terms of manual work. The boys devote this time to bench work. A new shop with a much increased equipment has added to the comfort and efficiency of our work this year. The first term's work is uniform for all students in a class, though the work is varied in difrent terms. The aim in the beginning is to secure accurate ideas and habits. The care and use of tools and methods of laying out work receive careful attention. Beginning with very plain pieces which are little more than exercises, during the term we are able to make some things that are of interest. During the past term each one made a simple stool and a book-rack. The last piece was made of oak and required the making of a joint. In the second term's work after some exercises in the making of various joints, each student selects the object he wishes to make, makes his plan varying the object in size and proportion to suit different conditions. He then makes the working drawing, orders lumber, works out the pieces, joins and finishes the object. The pieces chosen are usually small pieces of furniture as stools, plate rack, screen, wall hall-rack, magazine rack, book shelves, flower table, or jardiniere stand. Some boys with more skill, ambition or time undertake larger pieces as arm-chair, Morris chair, library table, porch swing, etc. For the girls we have this year introduced Domestic Art. During the past term a course in hand sewing has been given which has proven very acceptable. It has been appreciated both by those who had never done any sewing and by those who had had experience in sewing without any definite instruction. The work has been of a very elementary character involving a study of the most common stitches and their use in the making of simple articles. So far the sewing has been done in the regular class room. It has occupied one period a day except where the size of the class has made a division necessary. The first term's work is required of all the girls. It includes the construction of models teaching the exact methods for the making of each stitch in all details. These are followed by the use of these stitches in various articles which will furnish illustrations of their practical use. A note-book is kept showing the methods of work. In the second term's work a choice is given. Most of the class will continue the work in hand sewing, taking up more advanced processes, and the making of objects suitably made by hand.

A limited number of students, chosen because of skill in hand work, will take a course in shirt-waist making, involving the use of the machine, drafting pattern, cutting, fitting and

sewing. Others have chosen to take advanced work in basketry. Raffia and reed baskets will be made, special attention being given to the designing of baskets for special uses. In all the classes in hand work assistance is given by the art teacher, problems in decoration being worked out under her direction. Until this year the art and manual training work has been done by one teacher, thus limiting the work in both departments. Now separate teachers are employed and more satisfactory results have been secured. With the working out of the new course, with its added term of work, we are looking forward to the accomplishment of greater and better things.

Mr. Thomas E. Kelly spoke for the West Chester State Normal School as follows:

Manual Training was introduced into the normal schools some twenty years ago and has consisted mainly of work in wood. The present normal school course confines the work to a part of the Middle Year, thus making it one of about seven branches studied during the year if the student is confining his work to that of the middle year, and many more if he is pursuing both middle and junior courses during the same year. Recognizing the fact that students in general cannot pursue a course with profit and intelligently if the work in that course requires more than four and one-half hours of recitation per day, and also the fact that the work in manual training pursued in normal schools is for but part of a year, it is readily seen that the course given must of necessity be elementary.

The problem confronting the teacher of manual training is better appreciated when it is understood that the students coming under his instruction are not those that are systematically trained in grades up to his; but that they a body of students coming from various communities having had various opportunities for doing this work, and *many of them no opportunity at all.* Those who have had some instruction in it have usually not had their instruction in a manner that is satisfactory; that is, in such manner that it can be used as a foundation upon which to build.

It is necessary, therefore, in taking up work with a body of students like these, to present to them the very elements of the subject and to proceed scientifically as far as the time allotted will permit. As in other subjects, so in manual-training, no one can teach a subject effectively without a knowledge of that subject, and hence to introduce into this early work much of the pedagogy of manual training would be abortive, except in so far as the student gains a knowledge of method from pursuing systematically the course laid down.

Without going into details, it is safe to say that the aim of the work in manual-training at this normal school is to secure the following ends: 1. To acquaint the pupil with the uses and care of tools. 2. To teach him to read and to make constructive drawings. 3. To train his hand in the use of tools. 4. To teach him to put into concrete form with tools what he sees in working drawings; *i. e.,* to make him as far as possible an intelligent and skilled worker. While this is the minimum requirement here, it is nevertheless true that many of the more ambitious and skillful carry on the work to a point where the results secured are quite creditable, many producing such pieces as chairs, tables, bookcases, etc. It may be added that throughout the course, reasons are set forth for every step taken and the student is required to explain in detail the different steps involved in making working drawings and in arriving at the finished product.

It is to be hoped that the new normal school course will provide more liberally opportunities for fitting the products of state normal schools to do such work as they will eventually be called upon to do in their capacity as teachers. I believe that the work should fit the normal school graduate to give to the child, during its first few years in school, definite knowledge of form through clay modelling, to teach it the elements of weaving, and to give it elementary instruction in design and ornament, in the use of the needle, in constructive drawing, in card-board work and in basketry.

Not only must the teacher be made a skilled worker along the lines suggested, but she must as well be taught the pedagogy of her subject; she must be made to understand the natural order of presentation; she must fully appreciate the purpose for which each new subject is introduced; she must be taught why an order something like the following is a natural order of presentation:

First Year.—1. Playing with clay. 2. Modelling crude form from clay. 3. Modelling forms of three dimensions. 4. Modelling irregular, though definite forms.

Second Year.—1. Modelling geometric forms from clay. 2. Elementary weaving.

Third Year.—1. Modelling natural forms from clay. 2. Weaving simple designs. 3. Elementary work in sewing.

Fourth and Fifth Years.—1. Weaving. 2. Constructive drawing and card-board work. 3. Sewing. 4. Basketry.

The normal school course will not in the future adequately fit teachers for work in manual training unless it makes them not alone skilled workers, but as well enthusiastic workers who realize the importance of their subject, as well as the sequence of its parts. Manual training includes much more than the mere working in wood. It includes all that has been suggested in this paper, at least, as well as the working in wood; hence the new normal school course will not provide adequately the means whereby teachers can secure the necessary instruction in manual training unless all of the subjects suggested are included in the course and the proper time given for the right sort of teaching of them.

This is an age of industrial training; the public is demanding such training for the children of our schools; the state at large and the nation as well are doing their part in fitting the country boy and the country girl to take advantage of the rich opportunities that are everywhere about them in their own community. The tendency everywhere is to improve the conditions of home, to master such simple arts as will enable the occupants

of it to decorate it with taste and fit it for comfort. Normal schools, which are the very fountains from which the best educational thought and preparation should flow, must not fail to realize the duties that are incumbent upon them along these lines that have thus far been all too much neglected, to the detriment, loss, and discomfort of a great portion of our citizen body.

SOME SCHOOL SHOPS AND THEIR EQUIPMENT.

The subject of Manual Training was then discussed at some length by Messrs. Connelly, Kremer, Pelton and Rupert. Mr. George C. Hubbard, of the Oliver Machine Company, followed in a talk of much interest, illustrated with lantern slides, showing "Some School Shops and their Equipment" which occupied the rest of the morning session.

Since manual training is an educational agent, its general aim must be in harmony with the general aim of education, which I take to be the fitting for life by the development of powers active and latent. The education at school must now supply an element, not so much needed when farm and village life furnished that practical training so lacking in present-day city life. We must make good to the children the loss, and it is to supply this loss that we adopt so earnestly manual and trade school work. Call to mind, if you will, many of our oldest and best men whom you know, who state unhesitatingly that they owe their vigor and prosperity to the hard but healthful work of early years, to the fact that upon useful and manual occupation their very existence depended. They delight to tell of that occupation so vigorous and so healthful; that discipline which strengthened the moral nature through the development of usefulness and helpfulness to others; that work which called for so high a degree of intelligence and forethought; those miles of toil following the plow or the harrow, when they thought out the problems of the morrow: yes, best of all, that development of the ability to think—to think in action.

A community which furnished such an opportunity had less need of manual training in the school than have the cities of to-day, for now conditions of living are so changed that bodily and mental activity of the sort I have mentioned rarely exists in the home. The boys and girls not having experienced this training, do not feel its need until they start out for themselves, when the message comes to them, as it is sure to come to every live young person,

In the world's broad field of battle,
In the bivouac of life,
Be not like dumb, driven cattle,
Be a hero in the strife!

Views were shown in the woodworking shops of a good number of leading educational institutions, and mention in reference to these views made in part as follows: Pratt Institute, Brooklyn, Rindze Manual Training School, Cambridge; New York Vocational School, Milwaukee Trade School, Williamson Free School of Mechanical Trades, Albany Vocational School, Rollo School of Mines, Atlanta School of Technology, Birmingham High School, Alabama Industrial School, Boston Museum of Arts, Washington Industrial School, Schools at Pittsburg, Englewood, Harrisburg, Altoona, Scranton and other cities. Views of benches and machines were also shown and carefully explained.

Following the views of the machines a few pictures were shown of summer and winter scenes—snow scenes in Boston and Saratoga; summer scenes in the Yellowstone Park, Canadian Rockies, and Savannah—these to call attention to the fact that students should also be kept in touch with nature as well as with shop work.

As the heating of the soil, even by the sun's rays, tends to kill the amœba which prey upon the fertility-giving, nitrifying soil bacteria, let us kill the germs of inactivity and the other more objectionable germs which prey upon young people, by sterilizing in the crucible of action, and thus intensify the power of doing. If an ounce of soil contains, as scientists tell us, 30 millions or more bacteria, each working to turn unavailable into available plant food, how many potential atoms for good may seventy-five pounds of active boy contain? No wonder the joy of youth in heat of action! Let us help to develop and train this limitless potentiality! Let us through the saw, the plane, the chisel and the machine, wake to activity the very molecules of boy anatomy!

THURSDAY AFTERNOON.

The first paper of the session was read by Prof. Harry S. Bitting, General Director of the Williamson Free School of Mechanical Trades, in Delaware County, Pa. His topic was the "Solving of the Skilled Mechanic Problem by Endowed Trade Schools."

BY ENDOWED TRADE SCHOOLS.

The late Isaiah V. Williamson, the founder of the Williamson Free School of Mechanical Trades, was working on the solution of this problem for fully twenty-five years before he endowed the Williamson School on December 1, 1888. You readily see that he had this important problem in mind nearly fifty years before the educators and employers of labor realized that they would have one of

this kind to consider. His keen observation of business conditions and their development brought forcibly to his attention the effect of the highly specialized manufacturing methods which were rapidly forcing out of practice the apprenticeship system and eliminating the opportunity formerly offered to the young man in the industries, to acquire the necessary skill and training for the more important positions which require a good all-around experience.

This resulted in his decision to establish the Williamson Free School of Mechanical Trades. On December 1st, 1888 the school was founded and opened to receive its first class of pupils on October 20, 1891. Its place and influence in the industrial educational field has been far-reaching, and I desire this afternoon to give you some of the results of the Williamson School with which I have been connected for nearly twenty years. In doing this I will confine myself mainly to facts related to the five trades which are successfully taught at Williamson, viz: Bricklaying, Carpentering, Stationary Engineering, Machinist and Patternmaking, though I have no doubt that many other trades can be well handled on similar lines. You will see that I have solid ground for such statements as I may make when I tell you that we have had over 1200 pupils, 777 of whom have completed their apprenticeship.

In November, 1909, we prepared the following statement regarding 268 who were graduated the five years previous: The record of the classes graduated in 1905, 1906, 1907, 1908 and 1909, show Bricklayers 62, Carpenters 59, Stationary Engineers 31, Machinists 62, and Patternmakers 54, making a total of 268. On November 1, 1909, two hundred and sixty-six of these young men were living, two having died. They were engaged as follows: At mechanical trades as journeymen, foremen, superintendents and contractors, 244, over 91 per cent.; at College, 5; at commercial pursuits 15; no information, 2. Four of those at college worked for a considerable time after graduation at their trades, and the two who died were doing the same. The average wages being received by these graduates are as follows: Bricklayers, $4.64 for 8 hours day; Carpenters, $3.84 for 8 hours; Stationary Engineers, $3.60 for 10 hours; Machinists, $3.28 for 10 hours; and Patternmakers, $3.10 for 10 hours.

It has been for some years an established fact that our apprentices immediately upon graduation obtain employment as journeymen at journeymen's wages. We graduated 51 on March 26th, 1910, and by noon of that day had requests for 160 without an effort on our part, and within one month after graduation might have placed at least one hundred more. Five months after the Commencement I sent out a personal letter and list of questions to each member of the class. Three weeks from that date I had fifty replies to fifty-one letters sent out. The following is a summary of the replies and was published by our school in bulletin form:

WILLIAMSON FREE SCHOOL OF MECHANICAL TRADES,

Williamson School P. O. and Station,

Delaware County, Penna.

Trustees: James C. Brooks, Isaac H. Clothier, Chairman, Lincoln Godfrey, Alfred C. Harrison, John Story Jenks, John M. Shrigley, John Wanamaker, Treasurer.

Officers: President, John M. Shrigley; General Director, Harry S. Bitting; Director, James A. Pratt; Assistant Director, V. L. Rupp; Secretary, Alfred Helmbold, Jr.

There is a question in the minds of some persons interested in the subject as to whether mechanical trades can be successfully taught in schools. We are glad to be able to give a conclusive answer by presenting the following record of the class graduated March 26, 1910, within six months after graduation:

The class had fifty-one members, fifty of whom answered our detailed inquiries as follows: Twelve bricklayers average 51 hours per week employment, average pay 40½ cents per hour, per week $20.64. All employed and all like it. Thirteen carpenters average 51½ hours per week, per hour 30½ cents, per week $15.81. All like the trade and all but one working at it. He worked for some time, is now inspecting material in auto works. Four operating steam and electrical engineers, average 61.7 hours per week, average pay 20½ cents per hour, per week $12.75. All are at it and all like it. Eleven machinists average 55.7 hours per week, average pay 26 cents per hour, per week $14.53. All are at work and all but one like it. Ten patternmakers average 54.6 hours per week, average pay 30.3 cents per hour, per week $16.58. All like the trade, and all are working at it but one who is at mechanical drawing. The general averages are: Hours per week employed 53.79; rate per hour 30.8 cents; weekly rate of compensation $16.60. One not heard from, carpenter, we learn indirectly is at mechanical drawing.

Our courses are based upon purely instructional methods and can be applied to either abstract or concrete exercises. We use about half of each and adhere rigidly in all work to the orderly sequence of development. We have learned from many sources that the general academic and moral training given here has resulted in a high type of citizenship, and that our graduates for years past have easily assumed the duties and responsibilities of positions requiring skill, diligence, honesty and executive capacity.

And yet there are some good people who say that trades cannot be taught in schools, but that only some notion of them can be gained there; that no one can become a genuine mechanic until he has worked some considerable time in shops which are producing goods for the market. I feel competent to assure you that they are mistaken; not only from my experience at Williamson, but from a connection with large manufacturing establishments for about ten years prior to entering on school work. There is nothing mysterious in teaching trades thoroughly in schools. What has been done at Williamson can be done elsewhere. Of course, it takes time and money, but not any more than does manual training in our public schools. There are certain conditions which must be observed to obtain successful results in a trade school.

The course must be of sufficient length to include well graded and thorough instruction in the practice as well as the theory of the

trades. It must give proper collateral academic training, especially in mathematics and in mechanical drawing. The teachers must be masters of their trades, and capable of imparting their skill and knowledge to their pupils. Each teacher should have but one trade in his charge. They should not work on pupils' exercises or put "finishing touches" on them. The dominant tone of the school must be the shop instruction, the academic being auxiliary to it. Accuracy must be insisted on, but speed must not be forgotten. To this end time cards are invaluable. That is, every hour's work should be charged to some specific exercise.

The value of material must be constantly kept in the pupil's thought, and estimating costs should be a part of the instruction. The equipment must be of excellent quality and of such variety and capacity as to familiarize the pupils with the appliances they are to use in the world of business. The exercises should be natural dimension and not mere playthings. The work must be instructional, and for the pupil's benefit, and there should be no production for sale as that inevitably tends to keep the apprentices at processes with which they are familiar and retards their advancement. The instructional methods of a properly managed school are much more efficient than the commercial usages of shops.

Ex-President Eliot of Harvard has said: "The apprentice system has been in past centuries, and still is to some extent, an unjust and imperfect method. It is a slow and wasteful way of learning a trade and liable to great abuses. Any bright and diligent youth can learn a deal more in three years at a good trade school than in seven years of apprenticeship."

In this connection as before intimated it must be borne in mind that it is necessary for a school to give its apprentices sufficient shop experience in connection with the theoretical and technical training, to have them readily enter on commercial work. That this can be done our experience most abundantly proves.

The earlier and simpler trade exercises must be combined in more complex problems towards the end of the apprenticeship. The school day should be eight hours long on five days of the week and about three hours on Saturday, divided equally for a while between trade and academic work. During the last eight months the whole day should be spent on mechanical exercises. This adds to the ease of transition to commercial fields.

Time must be given for the pupils to properly absorb or assimilate what is taught them, and in our trades three years is not too long for this purpose. Our experience indicates that boys are insufficiently developed mentally and physically to enter vigorously on trade work with the tools and appliances used by journeymen before the age of sixteen years, then on graduation they will have the appearance and the qualities of manhood, and if properly trained will merit a man's compensation.

We find no difficulty in maintaining proper interest in instructional work. Indeed I am sure it commends itself to our learners more than if their efforts were mainly for the benefit of some one else. Furthermore the average young man enjoys using his hands and brain in unison. We rightly expect the pupils of our public schools to be interested in purely instructional, intellectual exercises, which involve no immediate commercial profit to themselves or any body else, yet many fail to see how similar conditions can exist in an instructional trade school where the work is so thoroughly enjoyed by the learner.

We earnestly believe that a certain moderate time should be devoted to what are called cultural branches such as civil government, history, English literature, etc. The larger mental training will give increased general intelligence to our young mechanics making them better workmen and enhancing their prosperity.

We must not only prepare trade school graduates by their training to earn a comfortable living and a surplus, and to secure whatever advancement may lie in the path of their callings, but must make it possible for them to become good citizens, capable of rendering their fair share of service in the higher activities of life, a blessing not only to themselves but to their fellow-creatures.

Professor Davenport, of the University of Illinois, has well said: "There is no higher duty resting upon all of us than to see to it no individual shall be compelled to choose between an education without a vocation, and a vocation without an education. I would have it so that the occupation of an American citizen may not be known by his dress, his manner, his speech or his prejudices."

I think the magnitude of the project which we are considering demands that it be made a public matter, and that, therefore, trade schools be made a part of the public school system. In such case the public trade schools should deal as efficiently and fairly with their pupils as do the high schools, commercial high schools, manual training schools and normal schools. Nothing less will meet the requirements of the case, or satisfy the aspirations of those parents and youths who desire vocational training.

Prof. William C. Ash, Principal of the Philadelphia Trade School, followed upon the "Solving of the Skilled Mechanic Problem by the Public Trade School."

BY THE PUBLIC TRADE SCHOOL.

What is the skilled mechanic problem, the solution of which we are here to-day to discuss?

If it were the purpose of my part in this discussion to present the best means for developing a skilled mechanic in the public schools, that is, the turning out at the end of from six months to four years of a mechanic skilled in his trade, I should not be here. For, after four years experience in industrial education in public schools, one of the few decided opinions I feel justified in expressing to a group such as we have here to-day, is that the development of finished mechanics is not the function of public schools. Nearly all boys and girls—and I shall deal entirely with

the boys' side of the problem—who select or are diverted into trade work, belong to that group of children who either from choice or necessity leave the regular school work with its purely cultural studies at as early an age as possible. Some few take up industrial studies at a later age because of a dislike for purely academic branches. Almost entirely, the applicants for admission to the public industrial schools which are operated within reasonable cost, are from fourteen years of age or under up to sixteen. With a three-year course, which is the maximum in public industrial schools in the United States, the students are graduated at from 17 to 19 years of age. Under existing conditions no workman is accepted as a journeyman until he has reached the age of 21. If all the many problems which present themselves in industrial education were solved, this question of age alone would make impossible the training of finished mechanics in the public schools.

It is possible, however, and altogether advisable that the public schools undertake the proper training of that vast army of the children of the country who will eventually become the skilled mechanics and thus determine the standing of the United States among the producing nations of the world.

The necessity of this work being undertaken by the public schools is so apparent to you, by reason of your knowledge of the disappearance of the apprenticeship system and of the existing highly specialized distribution of the processes of manufacture, that I shall not take any of the time given to this paper for a discussion of that phase of the question.

Taking for granted, then, the necessity of public industrial education and realizing the futility of any attempt to turn out a finished mechanic as a result of public school training, our answer to the skilled mechanic problem by means of the public schools resolves itself into a discussion of the means which have been adopted and the steps which may be taken toward the training of boys and girls for the trades. As President Eliott has said, "Industrial Education should mean trade schools and nothing but trade schools, that is schools directed, primarily and expressly, to the training of young men and women for the trades. They should be either full time schools or partial time schools; that is all such schools should be capable of being used by boys and girls who devote their entire time to schools, just as they do in our existing high schools, or by pupils who, being already at work, are allowed by their employers to give from six to twelve hours per week to trade schools."

Last spring, in order to determine the extent to which manual training in the public schools has become industrial in its scope, I spent some little time in gathering information on the subject. This investigation was not made with the aim of proving any preconceived ideas on the subject of industrial education but the purpose from the beginning was to determine existing conditions as indicated by the title of the investigation.

Assuming that the largest cities, in point of population, might be considered as typical, the two largest in every state in the Union, according to the report of the U . S. Commissioner of Education for 1909, were selected for investigation. In order to bring the number of cities investigated to 100, to this number were added the four cities paying the next highest salaries to superintendents of public education, assuming that such cities would be most likely to be progressive and in touch with whatever new ideas were in their judgment worth while.

Knowing by experience, the extent to which educators are bothered by questioners sent to them by students of education throughout the country, an effort was made to gather material from catalogues and by personal investigation, but after a time it was found that in view of the very recent changes that have been made in the city systems, the only way to get a thoroughly up-to-date report was to resort to the bothersome questioner with such trouble eliminating schemes as could be devised. Accordingly a copy of the catalogue of the Philadelphia Trade School, a self-addressed stamped envelope, with request for information, and a sheet on which the following questions were printed, having blank spaces for answers, were mailed to the superintendents of the 100 cities selected for investigation.

The following questions were asked:

In what grades (including high schools) do you have manual training? How long have you had this work? How much time per week is given to it? What change or modification of shop work has been made to meet the tendency toward industrial training? How has the academic work been changed? Have you organized classes or schools specially for industrial or trade instruction? If so, what are the qualifications for entrance to these classes or schools? What trades are taught? What is the standing, in the trade, of the pupils upon graduation? Are any provisions made by state law for the support or aid of industrial training? (I shall be further obliged if you will mail to me a copy of the provision.) From what budget are your classes or schools for industrial training supported? How do you maintain supervision of these classes or schools? How did you find teachers for these classes or schools? What facilities are offered in your city or state for the training of teachers of industrial or trade education? Are the products of your shops sold? Are they used in the schools or put to any other practical use? What was the per capita cost of operation of your secondary industrial schools last year? What was the average enrollment in these schools? What was the average attendance? Has there been a decrease in the number of pupils leaving school between the ages of fourteen (14) and sixteen (16) since the introduction of industrial training? In your opinion, should the aim of elementary manual training be cultural or industrial?

In answering the question as to the standing of the students in the trades after their graduation, one school reports that its graduates are credited with a half apprenticeship, four report their graduates to be well along in

their trades, while the rest give no answer showing that no solution has yet been found for this very important problem in industrial education. Five cities reported provision by state laws for financial assistance for industrial training. All but two of the existing public industrial schools reported are supported out of the regular school budget. One is supported by a special budget and one by private contributions and state aid. In all the cities reported, the industrial schools are operated under the public school authorities. In nine cities special supervisors or principals of industrial schools have been appointed, while in the others the work is directly under the supervisor of manual training.

To the question as to the supplying of teachers, one city did not answer, one uses teachers' agencies, two wrote to schools like Pratt Institute, Cooper Union, Williamson, Stout and Bradley. Three select teachers from their regular staff, three have regular teachers for academic classes and tradesmen for the shop while in five of the cities, the teachers in the industrial schools are all practical men selected from the shops. But four cities report any facilities offered in the city or state for the training of teachers of industrial education the work being done in all these cases in the state normal school. Three cities sell the product of the industrial schools (Milwaukee, Indianapolis, Columbus, Ga.). One (New York) has just passed a law enabling the industrial schools to sell their products. Fourteen cities use the products of the industrial schools in the public school department. The annual per capita cost of operating the schools reported varies from $60 to $208 according to the character of the work done in the schools. Reports of membership and attendance in the special classes of schools of industrial training vary from 18 to 186 for number belonging and from 17 to 161 for attendance.

As to decrease in the number of pupils leaving school between the ages of 14 and 16 since the introduction of industrial training, four cities report that there has been a decrease; three that there had not been; and eight that they are unable to say, as the work had been started so recently that statistics are not available. In answering the last question as to whether the aim of elementary manual training should be cultural or industrial, the general opinion expressed was that it should be both, or as one superintendent pt it, "Its aim should be to give knowledge of the industries. Such knowledge will be cultural as well as practical."

Of the 100 cities questioned, 60 returned answers. Of the 60, 8 had no manual training in any form in their public schools. In 52 cities having manual training, the shopwork was distributed throughout the school system as follows—11 in the grades only, 4 in the high school only, 37 in both the grades and the high school. The manual training courses in the several cities had been in existence for periods extending from 25 years to 1 year. Two cities not included in the 52 reported that they expected to introduce manual training as soon as the necessary funds could be raised. It was interesting to note that one city claimed manual training on the strength of a course in mechanical drawing which had just been introduced. The time given to the work varied from one-half hour per week in the grades to 10 hours per week in the high schools. The popular allotment was 1½ hours in a grade and 6 hours in the high schools. Twenty cities reported having rearranged their manual training exercises with the idea of making the work larger, more practical or in keeping with the industries of their own locality. The tendency in all these cities seems to be to expand from the purely cultural aim of manual training to include the more practical aim of industrial education. Ten cities have modified their academic work in order to have it more closely related to the work of the shops. Three have shortened the time given to academic branches in order to make room in the roster for more shop work while three cities have increased the time given to academic work. Fifteen cities have organized special day industrial classes or schools. One additional city has organized an evening industrial school.

Of the 15 day industrial schools the entrance requirements are as follows: 2 require age 13 and completion of 6th grade; 3 require age 14, and 6th grade; 3 make age 14 and no academic requirement; 1 says no age but complete 7th or 8th grade; 2 age 14, and 7th or 8th grade; and 4 age 14, with 8th grade. The various trades are taught in the following number of cities: Foundry work 1, house and sign painting 1, plastering 1, textile work 1, diecutting 1, steam engineering 1, bricklaying 2, sheet metal work 2, jewelry manufacture 2, forging 3, cabinet making 3, architectural drafting 3, mechanical drafting 3, printing 5, plumbing 5, electrical work 5, machine shop practice 6, pattern making 7, carpentry 7. The last three trades, machine shop practice, pattern making and carpentry are no doubt the most popular, because the equipment necessary has already been installed for use in the manual training classes.

As a result of an effort upon the part of the Master Builders Exchange to establish a trades school in Philadelphia, Mr. Murrell Dobbins, a member of the Exchange and also of the Board of Public Education, now the City Treasurer, interested himself in the movement, and in 1906 there was opened in this city one of the first trades schools in the United States, as an integral part of the public School system. Columbus, Georgia, also opened a secondary industrial school in 1906. The aim of this school is the development of intelligent workingmen and to this end an effort is made to stimulate an interest in and dignify the calling to which its pupils will go. The school does not aim to prepare its pupils for college or for a higher institution of learning and therefore, does not in any way, sap the usefulness of the present high or manual training high schools. The term is three years in length. The school is in session five days in the week from 9 a. m. to 3:30 p. m. with an intermission of thirty minutes at noon for lunch. The yearly terms begin and end as do those of the other public schools in Philadelphia. The following trades are taught in

the day school: Architectural drafting, mechanical drafting, carpentry, pattern making, printing and electrical construction. Of the thirty school hours in the week, fifteen are spent in shop work and fifteen hours are devoted to the study of English, mathematics, physics, chemistry and drawing. In all the academic work an effort is made to present actual shop problems and trade literature.

In English the course is similar to that in high schools in that its aim is to teach the proper expression of thought. It differs from high school English in that its work relates to technical subjects rather than to purely literary ones. In the second and third years instruction is given in business correspondence, the preparation of proposals, bids, specifications, contracts, etc. Economics, industrial history and commercial law are taught with an entirely practical aim. One hour per week is given to the study of literature with the aim of developing a taste for the right sort of reading.

In mathematics, at the beginning of the school work there is a general review of grammar school arithmetic and in a short time algebra is taken up. In the second and third years geometry, trigonometry and bookkeeping are taught. A constant effort is made to present practical problems in all the work in mathematics.

In the drawing room the work is in keeping with the trade being studied. Drawing being the language of a mechanic, it is essential that every intelligent working man be able to draw plans of his work and to read plans which have been prepared by some one else. At the beginning of the course every student, no matter what his trade, completes a series of elementary exercises in drawing. This work is completed in about five months and after that time, the drawing in the different trades is special. For example: Carpenters make drawings of the different wood joints and advance to house plans. Electricians make plans for switch-boards, house-wiring, dynamo and motor installation, etc. Except for those studying the trades of Architectural and Mechanical Drafting, it is not the aim of the drawing course to develop skilled draftsmen.

The instructors in all the shops are master mechanics in their separate trades. One of the most perplexing problems in arranging a trades school is the selection of teachers. As there is no training school for this specialty in the profession, the best thing seems to be to select a tradesman and then to train him as a teacher. The first qualification for such a teacher should be that he is a master of his trade. The academic teachers are college bred men who have made a specialty of the subject which they teach.

The first class, 24 in number, was graduated from the Philadelphia Trade School in June, 1909. These young men, except three who are studying at Drexel Institute and the University of Pennsylvania, are now working at the trades which they studied in the school and are earning an average weekly wage of $10. In June, 1910, the second class, 28 in number was graduated. Except two who are temporarily out of employment and two who are carrying on higher studies, these young men are working at an average weekly wage of $8.50. The school is supported entirely from the regular school budget and is under the supervision of a principal appointed by the Board of Public Education, and responsible directly to the Superintendent of Schools. There is no advisory board or committee of business men as is the case in some cities.

None of the product of the school is sold, but it is the aim to have as much of the work as possible on something of practical value and use. Work is therefore done in all the departments not only for our own school but for other schools under the direction of the Board of Public Education. It is my thought that the more nearly the trade schools can become the workshops for the Board of Education the more nearly they will realize their ideal—arranging the exercises so that no pupil shall have more or less than sufficient repetition, and keeping always in mind the fact that the boy and not the output of the shops is the aim of the school.

The per capita cost of operating the school last year with an average enrollment of 186 and an average attendance of 161, was $90.58. This amount includes cost of additional equipment and everything except interest on investment in the ground and building. These factors are not included because the work is carried on in an abandoned school building which was originally granted to the city of Philadelphia with the understanding that, if it should ever be used for any but school purposes, the property should revert to the heirs.

Owing perhaps primarily to the general impression that handwork is degrading, one of the first difficulties presenting itself in our school was that of gathering a student body. This is not a new problem. It was present when manual training was introduced in special schools. Nor is it to be wondered at now when one considers the fact that all the teachers in the elementary schools have been trained to feel that a professional career is the acme of success in a man's life. However, as the work and the purpose of the trade school have become known, the applications for admission have increased in number until now the building is filled to its capacity and another abandoned school has been transferred as an annex to the trade school. President Edmonds, of the Board of Public Education, at the commencement exercises last june said that if the school were housed in a building suited to its work, and compared in appearance with the other secondary school buildings the graduating class instead of being 28 would have been 128.

Given a school building and equipment which will compare favorably with others in the city, the student body of any trade school may be built up of the right sort of material, if the teachers in the elementary schools are taught to enter into the spirit of the work and use their directive influence in pointing those boys and girls who are industrially inclined to the school which will best fit them for the highest service and make them of the greatest possible

use in the community—and that should be the aim of all education.

The evening school, which affords an opportunity for trade work to young men who are employed in the day-time, is in session five nights in the week from 7.30 to 9.30. The only academic branches offered to the evening students at this time are mathematics, drawing and the theory of electricity and magnetism. This limit is set by the capacity of the building. Since the opening of the evening school, the applications have far outnumbered its capacity, and the classes are arranged to meet on alternate school nights so as to double the accommodations. This plan has not proved satisfactory, however, as the strain on the teachers has been so great that they have not been able to do their best work at any time. After the first of the year, the school will be reorganized, using an extra school building, and will meet but three nights a week. A number of special problems present themselves in evening school work but the time given to this presentation will not permit of their consideration. One of the most serious is that of age qualification and I shall make the bare statement that in my judgment no one should be permitted to undertake evening industrial work under the age of 18 years.

The fundamental matter for consideration in arranging the curriculum in either elementary or secondary industrial schools is the relative importance of developing muscular skill in the concrete processes in the trades, and of training in the simple virtues, such as honesty, sobriety, punctuality, accuracy, loyalty to one's self and to others, particularly to employers, etc.

Experience has developed a conviction, and this conviction has been strengthened by hearing Dr. Kerschensteiner of Munich, Bavaria, say that, in the grades, training in the simple virtues is by far the most important function of the public schools. As the work advances through the grades and into the secondary schools, the practical work may be given more emphasis. Care must be taken at all times not to develop the strong members in the class at the expense of the weak. The average intelligence of the class must be used as the basis in determining the course in the school.

It has been my purpose to keep this presentation within a half-hour. There are a number of problems which should be considered if the time would permit, but I shall merely mention them and if anyone is interested he may make note and I shall be glad to answer questions during the time given to discussion.

The ever-present race problem is more than ever evident in secondary public industrial schools because of the directive influence of elementary school teachers and the difficulty of placing the graduates in the trades.

In starting a public industrial school, care should be taken not to undertake to teach too many trades, nor to make too large an outlay of money, because of the difficulty of gathering a student body and the consequent high per capita cost.

The value of printing as one of the trades, because of its use as an advertising medium, and of its use to the school system, is worthy of consideration.

Much thought should be given to the entrance requirements in order to keep out of the school mental defectives, and impossible material which may be directed to an industrial school by elementary teachers whose aim is simply to rid themselves of that class of students (Benny & Christhof).

Care should be taken to make it within the bounds of possibility for a student to continue his studies in higher institutions should he be inspired to do so. One of the first objections to public trade schools was that they had over their doors "Abandon Hope, All Ye That Enter Here" (Adler).

The catch phrase shop mathematics might be considered at length with profit to all of us who are in the work.

The salaries of teachers require more than ordinary thought.

The boys in the printing department of the Philadelphia Trade School are now working on the new catalogue of the school, and I shall be glad to have a copy mailed to any of you who will write for it.

If you have not already done so, I recommend that you read "The Worker and the State" published by the Century Co. written by Arthur D. Dean, chief of the division of Trade schools of the New York department of education. It is the best work yet published on the subject.

In closing this paper, I call upon all of you who are interested in the question of industrial education to guard against the thought even, that in this work, we have found the panacea for all education ills. That stand which is being taken by many radical thinkers will work injury to our cause and will give unbearable embarrassment when the pendulum of educational thought takes the backward swing as it surely will sooner or later. Ours is but one of the many phases of the solution of the eternal problem and if we will be content with doing our part in creating in the minds of the subjects who come under our control, a real joy in the work they are given to do we shall accomplish a lasting step in the development of the state and the nation.

The last paper in this very practical discussion was by President C. R. Dooley, of the Casino Technical Night School, Educational Director of the Westinghouse Electrical and Manufacturing Company, East Pittsburg, Pa.

BY SCHOOLS FURTHERED BY MANUFACTURERS.

The public schools are not developing in their pupils any idea of the principal application of the fundamental sciences, nor any idea of a life of efficient service. The Trade schools, handicapped as they must be by their entire separation from real business industry and by not having as instructors men who are actively employed in the industries, are doing some excellent work but they cannot be expected to take the place of the public school, and they can never hope to supply the enormous demand. There are exceptions to these statements of course, but if they were not true in the main there would not be so many industries in the educational business to-day. Since the industries are taking a hand, and since

they are largely the users of the product of the schools, it would seem reasonable that they would have some rational ideas on the subject. They have not solved the problem of industrial training—I don't think they could if they wanted to, but the tremendous advantages of having class-room training and practical work sandwiched daily and of having, as teachers, men who are themselves hammered daily for efficient application of their service may, under some conditions, prove the very best kind of training.

The Situation.—Look for a moment at the situation confronting the industries. The supply of competent labor does not begin to meet the demand. Managers of Industries are eagerly looking for workmen of all-round skill. The day of extreme specialization is passing. The present day mechanic is a transient special tool operator and not a mechanic at all and is being recognized as an efficient workman for several reasons briefly as follows: 1. The machine hand, however skillful in his line, cannot be shifted about the factory according to the fluctuations of business. When business in his division declines he must be laid off. A good man is lost and a green man must be broken in when this part of the business picks up. 2. Having such a narrow vision of life and industrial opportunities, ambition, pride-in-achievement and real industry never develop very high. A mechanic can rise no higher than his aspirations and a company no higher than the character of its workmen. Therefore whatever the final solution of this problem may be, it certainly rests upon a human foundation. 3. Specialization has gone so far that the average workman does not think for himself and only becomes proficient after numerous repetitions. He has to be shown in detail each new variation of his line of work with the result that many shops to-day maintain a large force of men known as demonstrators, and the average foreman will tell you that practically all of his time is taken up with *breaking in* workmen. 4. This class of workmen makes mighty poor material from which to draw the foremen and managers of the future.

Any system that allows a man to become a mechanical producer instead of a thinking producer, is not only wicked but is rapidly being recognized as inefficient and uneconomical. The industries are calling for thinking workmen—men who are able to catch an idea and execute it correctly and with economy of time and effort—men of all-round skill and sound judgment in their trades. Nor do they want only a *few* such men to *drive* a horde of careless workmen, but every man in the rank and file, from the Janitor to the President, is being required to do constructive thinking and to measure up to the standard of efficient service.

Modern industrial organizations count upon the foreman or general manager as a leader, not a driver, a helper to the workmen through his superior knowledge and skill, through his encouragement and through his personal inspiration. And just so the development of our educational system must come through the employment of leaders eminently trained for the job. The employer's question to-day is not how to get a man to do a day's work for the least pay, but how to get the most efficient work from a man, and employers are glad to increase wages for increased efficiency.

To build up such an organization, many industrial concerns have established apprentice systems including school-room work on company time. I will describe briefly the Trades Apprentice System of the Westinghouse Electric & Manufacturing Company of Pittsburg, endeavoring to show you the methods employed, some of the results obtained, and a few observations bearing upon the relation which the public school sustains to this problem.

Object.—Like any other branch of industry, the Educational Department is operated for profit to the company—a business proposition. It is good business to develop machinery. It is better business to develop men for *they* operate the machines. It is better business to develop men because, while a good machine begins to depreciate the moment it is put into use, a good man with a little training will never cease improving. The aim of the department is to train the boys into habits of productive thinking and accurate observation and not, as may be supposed, to acquire a sort of memory of certain rules and tabulated data. The development of the boy and not shop production is at all times given first consideration.

General Plan.—The company offers apprentice courses in four trades, Machinist, Blacksmith, Tool maker and Pattern maker. There are at present 207 apprentices enrolled, eighty per cent. of whom are following the Machinist's trade. The course is four years long, and the company pays its apprentices 11, 12, 15 and 18 cents per hour, for each year respectively. Those who complete the course are given a bonus of $100 cash and a diploma signed by the officials of the company. The training work is in three divisions which are carried simultaneously throughout the four years. 1. Formal school or class-room work, of which each boy gets four hours per week. 2. Shop practice in a special training shop fully equipped with machine tools. 3. Shop practice in the factory under regular conditions.

Class Room Work.—Each apprentice reports to the class-rooms two days a week, two hours per day from 7 to 9 o'clock in the morning, a total of four hours per week. One of these two-hour periods is devoted to "Shop problems" and the other to "Mechanical drawing." Some attention is given to English and it is intended to develop this further, as the deficiency in it is positively distressing.

Shop Problems.—No text-book is used. The problems are all made up by an instructor in charge of this work. A few characteristics of these problems are notable. 1. The language and names of things used in stating the problems are those met with in daily life about the factory. 2. There are no abstract problems. Each problem is a definite practical statement closely related to daily life. 3. No hard and fast divisions of the Arith-

metic, such as "decimals," "fractions," etc., are held up before the boys. 4. No formal rules or methods are set down to be committed. 5. A problem is more than a mere problem—it . a statement of real conditions and often more data are given than needed, requiring proper selection. While nothing in advance of the Arithmetic is taught yet the formal word "Arithmetic" is not used. The boys are graded into several classes according to the classification of the ordinary Arithmetic in a very general way, but at all times they are studying "shop problems" and not "decimals" or "percentage." The problems are to be solved by analysis and the application of general principles, without regard to whether they belong to the "Proportion" group or the "Mensuration" group.

We have found boys whose previous schooling had been so formal that they could not do Long Division without placing the dividend, divisor and quotient in certain definite relative places. A student should so comprehend such an operation that he could put the dividend on the blackboard the divisor on a scratch pad, and write his answer on the floor—and he may do all this in a neat and orderly manner. Neatness and order do not mean conformity to one definite form laid down by the law.

Rules are not given with the command, "Learn these for they will be useful later on." But the boys are put up against little problems of real life, and then, by the guidance of the instructor, the proper method is explained and the student assisted in formulating his own expression of such rules as are necessary. To do this requires two things: *First:* High Grade Teachers. *Second:* Small Classes. We have both, for we believe that the work is worth doing well.

I gave this problem to a class of fifteen apprentices: $\frac{3 \times 8}{3}$ and they solved it readily. Half an hour later the following was given to the same class:—"How many bolts each 4 inches long can be made from three brass rods ½ inch in diameter and 8 feet long?" Not one saw the similarity between this problem and the previous one. Some asked what to do with the ½ inch diameter, and one thought bolts were made of iron, and the brass in this problem bothered him. After a little suggestive discussion, about half the class fully comprehended the problem and its solution.

Another example will illustrate the practical application of fundamental principles. This problem was given one of the advanced classes and was readily comprehended and solved. "A casting weighing 4000 lbs., is to be raised by means of a crow-bar. The distance from the point of the bar under the casting to the pry-block is four inches; the distance from the pry-block to the point where the bar would be grasped is four feet." The question asked was not how many pounds weight will balance the load, but how many men will be required to raise the casting. Immediately some one asked how much a man weighs, and the reply was, "Use your judgment, Would you send one man or ten, to do the job?" Then the problem was carried further. "How high will the casting be raised?" They soon decided that it could be raised about one inch. Then they were asked, "How many men will be required to raise it ten feet? and the answers came thick and fast all the way up to 120 times as many men. By-and-by one boy said, "Two men—keep blocking up the castings," and another said, "Then you'll need three men, one to fix the blocks"; and so on, lead the boys to think out rational solutions to everyday problems by the application of the fundamentals of arithmetic. In the case just cited they were dealing with proportion, but they did not know it as a formal dead and difficult part of the arithmetic to get through with on examination day. One of our instructors told me last week that in assisting his daughter, who is in the High School, with an Algebra Problem, he used the letter "y" to represent the unknown quantity. When he finished she said she understood the solution but didn't just see how he could use "y" and get the answer while her teacher told her always to use "x."

The majority of our boys left the public school at the seventh grade and have been out of school from one to two years. Out of 100 who took a classification examination, 50 could not add decimals or complex fractions and but 25 could *at all* handle problems in simple percentage. The great majority had absolutely no physical conception of the meaning of a problem not even in areas and volumes. I have asked many new boys to find the area of the top of the desk 4×5 feet, and received the answer $4 + 5 = 9$ or "I have forgotten the rule." Last week the following problem was given to a boy making application: "How many feet of wire in a coil weighing 204 lbs. if there are 32 feet to the pound?" He puzzled over this problem and six others like it, for four hours, with no result. I asked him if he could multiply 204 by 32 and he said he thought he could and he did it correctly. He knew the rule but not its application. (This boy is 17 years old—left school at the seventh grade—a year and one-half ago.) These cases are not exceptional, they represent at last half the boys who come to us. Nor are these boys stupid and dull. On the whole they are wide-awake and of good appearance. They take readily to leading suggestions and are making rapid progress in their application of fundamental principles to practical problems of every-day life.

As far as possible the boys are never required to take anything for granted because its derivation is based on "higher mathematics." *For Example:* The value of π is proved quite to the satisfaction of all by providing a dozen or more discs of different diameters. Each boy measures the diameters and circumferences of these discs and works out the ratio in enough cases to satisfy him. The specific weight of different metals is also worked out by measuring and weighing numerous samples in the class-room. This

creates interest and fixes values in the memory. The apprentice knows that a cubic foot of cast iron weighs 450 pounds because he has calculated it, and he will not soon forget it.

Mechanical Drawing.—Little or no time is given to the theory of third-angle projection. The boys are given simple objects such as washers, nuts, bushings, small shafts, etc., and told to make free-hand pencil sketches. Each sketch is to represent only one side of the object. There may be as many sketches as there are different sides, though usually three will be sufficient. Group the sketches according to the relative position of the sides represented. All this of course is *shown* to the boys by the instructor and not delivered as a *lecture.*

After making a few sketches and locating all the dimensions, the apprentice makes a mechanical drawing to scale, with drawing board, "T" squares, instruments, etc., from the sketch without the further aid of the object. All the work is done in pencil—we have never had a bottle of ink in the Drawing Room. Accuracy, neatness, and speed are watched closely, but it is not so essential that the boys make beautiful drawings as it is that they fully comprehend what a drawing represents in the *mind* of its *maker* and to the *mind* of the *workman.* In addition to this there is a great deal of information picked up about the parts of which they are making drawings. A description of the piece, its use and parts of design, are taken up with the student with the view to arouse interest and to increase his powers of observation. They learn the names of metals, alloys, machine parts, etc., and afterwards are required to work problems in volume, surface or weight involving further application of the principles learned in the problem class.

After the boys have a fair idea of the mechanical process of making a sketch and then a scale drawing, they are required to make small modifications, as the instructors may indicate. For example: "Change that thread to a left-handed one." "Take the lug off the right side of that casting and put it at the top." "Construct the balance of the machine about this part." Oftentimes such suggestions necessitate the boys' going from the class-room to the very machine with which he is working in the shop to observe some arrangement that has been under his nose for months.

The Special Shop.—The equipment in the special training shop is divided into four groups as follows: Lathe work, Planer work, Boring Mill work, and Bench work. There are other tools in the department, but the instruction centers about these four groups. The instruction is in charge of Shop Instructors, having the rank of Foremen. A general foreman supervises the work. Upon entering the course, the boys are put upon one of the above tools from a period of 4 to 6 months, during which time they are instructed in the fundamental principles of that particular tool, including both the care and operation of the tool and the methods of handling different kinds of work on it. This includes a study of cutting edges and cutting speeds for different materials and under different conditions. The work done in this shop is along the lines of regular shop production, working on standard articles of manufacture, and not mere exercise pieces. Standard factory systems for handling work are used, except that instruction has preference over production. Gradually speed and other characteristics of shop production are brought up to the regular shop standards, at which time the boy is transferred to the factory where he gets real production experience on the same kind of a machine tool for a period of 6 to 8 months. At the end of this time the boy is returned to the special shop and begins his second year on the second tool group. In this manner the four groups are covered in his four years.

If a boy masters these four tool divisions in good shape, we believe he has an excellent foundation to become a skilled mechanic and we are willing to call him a Journey man and glad to pay him Journey man's wages. And we believe the majority of boys who have good health, a little common sense, and a strong desire, will succeed easily. The shop instructors supplement their work by talks to the boys both in small groups gathered about some tool in the special shop and in the mechanical drawing class-room. The great accomplishment, however, is made through the personal contact of the instructor and the apprentice. Here again the instructors are the best that can be found—expert mechanics with a fair ability to explain and with a natural sympathy for the boys.

Regular Shop Practice.—In the regular factory the boys are put right up against standard production, side by side, with regular Journey men. Here they get their real shop experience. Here also the apprentice department watches over them through apprentice foremen, who spend all of their time in the regular shop. The regular shop foreman will not have an apprentice around unless he can do the job. The apprentice shop foreman sees that a capable apprentice is provided and that he gets a fair show for his effort. In this way the boys are assured of work suitable to their normal development and so far, both the ability and the attitude of the boys have so pleased the shop management, that first-class work is trusted to them. In fact the demand for the apprentices is increasing all over the shop notwithstanding the four hours lost while the apprentice is in the class-room. These apprentice foremen in the regular shop are a great help in the operation of the department, both in training the boys and in educating the shop organization up to an appreciation of the general subject of industrial training as applied to specific jobs.

Apprentice Organization.—With the assistance of the instructors, the boys have organized a club under definite rules of organization, and managed by their own elected officers. Some of the meetings are purely social while others are technical, at which experts

in the factory organization give informal talks.

Attitude of the Company.—The First Vice President of the Company is actively interested in this work. That the entire arrangement of the Company appreciates the danger impending future industrial development due to poorly trained employees, is evident from the variety and magnitude of the educational works which it maintains or encourages.

The Trades Apprentice course, which now numbers 200 boys, is being increased as rapidly as conditions will allow. The plan is to have several times this number.

The Engineering Course open to the graduates of Technical Colleges numbers 400. Various educational and social activities are maintained for these men.

The Casino Technical Night School, which is located near by, is assisted to a large extent by the Company, and it in return has received many valuable men. Enrollment is not confined to employees. A nominal tuition fee is charged. The present enrollment numbers 500 students and 40 instructors.

Within the past six months a school of Salesmanship has been inaugurated. The young men selected to take up this work spend their entire time in the training department for a period considerably longer than you might think.

In short, there are over 1000 employees of the Westinghouse Electric & Manufacturing Company who in a very specific way may be classed as students. There are also about 100 employees engaged for at least a part of their time as teachers. And all of this is costing thousands of dollars—not as a dead expense but as a good business investiment.

A Word to the Public School System.—It is highly essential to devise some means of keeping boys in the public schools, at least through the Eighth Grade and longer if possible, and their study of arithmetic should give them a practical training through problems closely applied to the things of their daily lives. I know of no text-book that makes even an apology of doing this.

The public school system of teaching is apt to be too formal and lifeless to admit of enough flexibility to develop originality in the pupils, especially those of vigorous physique and strong practical tendencies. Principles should be taught always for the sake of their application, and never for the sake of the principles themselves.

You may well consider whether you are teaching the boys to memorize or to comprehend, to study or to think. Efficient teaching is done like efficient management—by the inspiration of the leader and not by system alone. Would it not be well to spend more money for teachers and less for equipment which elicits our pride more for the beauty of its architecture than for the product?

But the greatest move of all in the interest of education for efficiency will be to remove it from politics, absolutely. The City of Indianapolis has made a long stride in this line, but it is not in Pennsylvania.

Conclusion.—We have not solved this problem. There never will be only one solution. But by concentrated honest effort and co-operation of spirit as well as of practice, you may some day arrive at a series of solutions and be able to properly distribute them according to local conditions. As it is to-day, the industries are unquestionably supplying a line of class-room instruction to their apprentices which they should have learned in the public schools.

The problem properly belongs to the Public School, but I am sure the industry with which I am connected will be glad to co-operate in any practical way that will better enable the young man of to-day to fit himself for a life of service according to the very best that is in him, for the better his training and the more he can earn for himself the more valuable he will be to the company.

We will be glad to send sheets of problems to any one who cares to ask for them, and I can assure you that such boys who may come from your several districts to the Westinghouse Electric & Manufacturing Company will receive a square deal in entering a limitless opportunity; and during his four years apprenticeship his training will not only cost him nothing, but he will receive in wages a total of nearly $1600.

The discussion of these papers was by Messrs. Connelly, Rupert, Kreutzpointer, Pelton and Wagoner.

The Committee on resolutions made their report which was adopted as follows:

RESOLUTION.

Whereas: The demand for instruction in the Manual Arts is increasing and in many instances must be conducted by the regular teachers, and inasmuch as their demand is growing to such an extent that in the near future teachers who have had no instruction in the Manual Arts will be seriously handicapped in securing positions; therefore, be it

Resolved, That we hereby recommend that, in all Normal School courses in the state of Pennsylvania, there be a minimum requirement of training in the Manual Arts equal to five recitation periods a week for one school year.

Resolved, That a copy of this preamble and resolutions be sent to the principal of each Normal School in Pennsylvania by our Secretary, and further that the said preamble and resolutions be sent to the Committee on resolutions of the General Association with the request that the same be embodied in their report.

Resolved, That we hereby request the Legislature to direct that a commission to investigate the condition of Industrial, Agricultural, and Commercial education in Pennsylvania, be appointed, and that said commission recommend legislation regarding the same.

Signed: Sylvester F. Pelton, Jean R. McElhaney, C. B. Connelly, S. F. Kreemen and Iris Prouty, Committee.

The Committee on Nominations reported as officers of the Manual Training Conference for 1911,

President.—Thelwell R. Coggeshall, Superintendent of the Mechanical Schools, Girard College, Philadelphia.

Secretary.—Lewis W. Cruikshank, Friends' Select School, 140 West 16th Street, Philadelphia.

These officers were duly elected. The Department then adjourned.

NATURE STUDY.

THE Nature Study Round Table held its meetings in the Auditorium of the High School. At the first meeting, on Wednesday morning, after a brief address by the Chairman, Professor L. J. Ulmer, a paper was read by Professor D. S. Hartline, of the State Normal School at Bloomsburg, upon "How to Connect Nature Study with Life Problems." A profitable discussion resulted. He spoke much as follows:

When Jesus, the Master Teacher, in his efforts to set clearly before his learners his mission as a teacher of life, uttered the parable likening the Teacher-Pupil relationship to that of shepherd and sheep and found himself obliged to explain and make a personal application, he said in the course of the explanation, "I am come that they might have life and that they might have it more abundantly."

When the grand motive of our teaching of Nature is to lead the boys and girls to a knowledge and love of Nature, and through this to a knowledge and love of Nature's God, we frequently look over the ground covered, examine the methods and results, reflect on the experiences met on the way, study the rate of speed, take a look ahead. And when we get to the high places we look for the degree of fulfillment of the promise that His coming should be for us more abundant life.

What an inspiring spectacle this is! You need only remember that life is a continuous adjustment to an everchanging environment, and briefly compare knowledge of and adjustment to environment by preceding generations with those of the present, to realize how amazingly the great promise has been and is being fulfilled. Then we take up our share of the glorious work with new fire, with new zeal.

Only yesterday our own Wright Brothers astonished and delighted us by the accomplishment of human flight—the dream of generations; the evidence of knowledge of and power over things, forces, relations, in our surroundings—matter and space—wished for since the first man saw the first flight of the first bird; laboriously worked at since the crude efforts of the Montgolfiers hinted at the possibility of success by some one willing to study nature, to work, to dare.

This generation has seen the changes in our environment that came about and are still coming because of the electric light, the bicycle, the trolley-car, the automobile, wireless telegraphy; and we have rapidly and delightedly adjusted ourselves to these changes. We saw the building, and joyfully celebrated as an engineering marvel, the completion of the Brooklyn Bridge; the greater bridges since built are too commonplace for us to celebrate, since we can so occupy ourselves with that more unexpected and more daring engineering feat, the Hudson River Tubes; chiefly because of their newness and their powerful appeal to the imagination. Here is call for readjustments, on earth, under earth, under water, high in air.

This generation, as school boys and girls, predicted the preservation of the eloquence of Gladstone, so far as the human voice expresses it; this "canning" of the best songs of our sweetest singers, the recording of the musical triumphs of the greatest, sweetest human voices, and of the most ingenious instruments for mimicking it. And now we see and hear ourselves proclaimed true prophets by the wonderful reproductions of the Edison products in this line, the Victrola, and the like of it.

Our greatest concern, of course, is with our human relation—our environment in humanity, in short, our neighbors. But all the others minister directly to these. The study of these, the wrestle with them, the improvement of them, are for the sake of improving the human relationship. Here, in the need of continuous readjustment, because of increased power coming from increased knowledge, lie the "life problems" referred to in the topic assigned. Reflecting on these things and many others like them, and remembering that all of them are the products of Christian civilization, who will not say, in the face of such facts, that because He came and lived and taught men how to live, we know life better, love it more, and have it "more abundantly"? We know our environment better, we have greater power over it, we get more out of it, we can adjust ourselves better to it, change it, change ourselves, and get into new relations more easily.

For those of us who are not quite satisfied that this phase of instruction ought to be incorporated into the school scheme, who have been holding off to await developments, who, because of the great burdens already loaded upon the schools, are a trifle resentful, possibly resisting, it might be well to recall a bit of recent school history.

Have you thought that precisely this same call for Nature Study by the schools was made before, and that one of the calls came when we, this generation of teachers, started on our career? The schools were so much under the dominance of the word-studies that the very names are the record of the state of affairs. What is the word *Physiology,* literally translated, but "Nature Study?" And the history of the narrowing of its meaning till, as now, we make it stand for the study of the Human Body, is a part of the school's response to the call. We are getting a repetition of the call, and now it is Nature Study—maybe in the hope that it will not be misunderstood. The history of the school's dealing with the subjects named Natural Philosophy, Physics and Natural History is similar.

And we teachers stop for a while to ask ourselves and others who will hear us, some questions: What is Nature? What shall Nature Study comprise? Cui bono? Isn't all study Nature Study? Isn't this demand a reflection on our methods of study and teaching? Isn't it a return to, and extension and a modification of object teaching? Is it a hint that our teaching is too bookish? Is it a protest against our pigeon-holing of subjects? Is it a protest against formalism —"the machine?" Why can some enthusiasts periodically stir up things and make us wonder why we don't add something or other to our school curriculum?

Dear old John Burroughs, strong, gentle lover of Nature, successful "Hunter of the Beautiful," takes up magazine cudgels and makes us understand that love of nature and its joys do not come through formal school methods; that true Nature Study grows out of love of Nature; and now we are at the place where we began; we have gone just as far as the kitten chasing its tail; almost content to believe that Nature Study is like poetry and the Nature student like the poet—"born, not made."

Bailey tells us that "In every person there is a latent desire to know something of the enclosing world. The desire is usually ironed out in the intellectual laundering processes." Meantime the appeal rings in our ears, and we begin to "get busy"—to do something. It does not take long thinking to come up to the idea that in our work it is a mistake to become settled, to have a nicely settled curriculum, and a well settled order of procedure. In some chemical operations it is easy to see the need of some settling and settled condition of things. But life is no such chemistry. Here conditions are constantly changing. Things are in a continuous flux. The very existence of life depends on this. We are dealing with life and life-relations, and our school must correspond and be itself a living, changing, growing organism. It is a stream, ever moving onward, always becoming greater; but for the most part, rippling, rolling, dancing merrily forward, in clearly-defined flow places, and the stagnation of settled things nowhere, excepting in the dying pools abandoned at the side.

He who reminds us then that school life is too full, too complex with subjects; that we need to go back to the simple school life; that we must press harder on the three R's and concern ourselves less with frills and fads—he needs to be reminded that Life is more complex, and daily becoming more so. The demand for nicer adjustments, more quickly and easily made, is becoming heavier daily, almost hourly. If education is a leading out of powers inherited and acquired, if school life is a preparation for life beyond, then it too must become more complex as we proceed, and the increase in complexity must be in the development order—simple at the outset, but swiftly leading into the complexity of present life-relations, always corresponding with Life's processes.

Miss Caroline MacMinn of Williamsport followed with a paper on "Winter Excursions," showing that Nature calls her students in the winter as well as at other seasons—if we but realize it.

NATURE STUDY TRIPS IN WINTER.

"'Nature Study' should mean nature loving. Its object should be to open the minds and hearts of the children to a greater interest, a keener appreciation, and a deeper reverence for the beauties and wonders of creation. The wondering minds should be quickened."

Much nature study material for winter work can be obtained during the autumn trips. But far greater interest can be aroused and better work will be done by having, at least a few trips during the winter months. After getting a class very enthusiastic in their nature work during the early fall, too often this interest is allowed to lag when cold weather comes; and, although winter trips are harder to plan for and to take, there are many interesting and profitable ones available even for a city school.

Naturally the first trip after the leaves have fallen will be for cocoons. Wherever caterpillars were most abundant, there their winter houses are more apt to be found. But one must be prompt for the birds are often there early to harvest the crop. It will usually be discovered that almost every bunch of dried leaves left hanging on a branch is likely to prove part of the desired plunder. The bittersweet is at its prettiest after the first frost and its bright berries make a decoration much admired in the school room where it can be studied at leisure. We have found too that a branch of nuts picked green will not open and that both nuts and leaves are good for use all winter. After the first light snow fall,

is the most propitious time for hunting the witch-hazel with its bright yellow strap-flowers, and the nuts on the same bush. Be sure too to gather some of its "boarders," the galls, for they are as interesting as the plant itself. And what youngster will not enjoy being pelted by the hazel nuts as they are popped open by the heat of the school-room? Of course, the leaves of the witch-hazel and the bitter-sweet must be gathered on an earlier trip.

Then there are our friends the trees. To be sure, their summer dress is gone but some of them may still be recognized by their appearance and by the nuts and dried leaves on the ground nearby. Now we can more readily study the amount of work done by the different trees in preparation for the winter, how, while the horse-chestnut has a few well-protected buds, others may not seem so well protected—and from it draw a lesson. Now also is our chance to study the last year's growth as to numbers, size, shape, texture, etc. We may also study trees on a hillside and on the level, a solitary tree and its kind in a forest—as to size, shape, the way they are held in the ground, protected from the wind, and many other things. Some bright day in December we will go to the woods to study the evergreens or "Christmas trees," as they are sure to be called. As we already have our leaves and fruit from the deciduous trees, we may now note the difference between leaves and needles, fruit and cones, the bark, the wood, the branching, etc.

After the vegetation has been killed is a good time to study rock structure. Long fingers of icicles on the breast of a ledge of rock speak plainly of the frost giants at work there; masses of rock dislodged will disclose a tracery of rootlets; the talus formation at the base of the cliffs shows the wreckage made. Many cracks and crevices show good openings for roots and frost to do their work. And just before the spring trips begin, be sure to return to see the damage done during the winter.

At this time, the plants are done blooming and their season's work is finished. So we will gather them now to study the three kinds: Annuals, those producing seeds; biennials, those storing nourishment; and perennials, those producing seeds and buds.

A trip to the sandstone quarries to study building stone, or to a limestone quarry, makes a good winter excursion before the deep snows. One near town shows the pitch of the strata at six different angles. In another coral limestone, cup coral and tree coral can be found, while the stone in the third is black.

Snow, ice and frost can be studied easily near the school. Snow and ice being poor conductors of heat make a warm covering. In this connection, a trip to the river will be profitable. Every child is interested in the business of ice-cutting from the time the great cakes are marked out, until it is loaded on the wagons to be taken to the ice-houses. Then, near by, some industrious fisherman is sure to be at work catching the fish that come to the surface of the water for air. A lesson on fish, their kinds, forms, and life habits can now be taught.

During February, we begin to look for signs of spring and chances for nature study trips are many. Bright-eyed boys soon see "the early bird" and a trip to the swamp is now in order, for there the birds are earlier and more plentiful. Water birds, land birds and aerial birds of all kinds stop here on their journeys north and south.

A trip to a maple sugar camp can be taken only during cold weather and would surely prove worth while to those fortunate enough to live near one. Also a trip or trips to a lumbering camp would provide lessons enough for an entire winter's work.

Late in February or early in March we can go for our horse-chestnut, wild cherry and pussy-willow sprays—when the sap has begun to run and the buds begin to swell, but we want them before the buds have begun to open. As soon as the deepest snow has gone, we get our hepatica plants, which on account of always having their last year's leaves, are easily found. As soon as the hepatica is well started, a trip to the "sandy" swamp is due. Of course, here one must know just where the different flowers wanted will grow as none are yet visible. But the interest is in what may come up in the box of dirt. One March we succeeded in getting a more odd and more beautiful plant than usual. This proved to be a large-flowered water-arum planted in a damp shady place; it has grown and bloomed every spring since.

About the time the ice is melting the sturdy "skunk cabbage" has pushed its way up to the sunshine. Soon after this the frogs can be heard in the swamps. Now begins the hunt for the eggs of frogs and toads. As these will hatch, grow, and develop during the term this is a most profitable trip. If some crayfish, snails and lizards can be found and the lizards persuaded to shed their skins in school so much the better. A belated turtle and a bat found on different trips made many lessons and kept up interest for one winter. The nests of mud wasps, paper wasps and hornets can be more easily found after the leaves are gone. As there are usually undeveloped eggs and dead insects in these nests, both house and inhabitant are useful material for the nature study student.

Now while we are looking for birds and have found the skunk cabbage, we are pretty sure that winter is over and that insects, birds and flowers will soon be so plentiful that we cannot hope to study them all; and that from now on our nature study trips need be limited only by the amount of time at our disposal.

In closing may I make a plea for the nature-study stories, myths and poems? They help to gain interest and impress the information before the trip, during the trip and all through the succeeding lessons. For it surely is pleasanter to hunt for a "fairy" than for a hepatica; to know why a crow is black and not white; why the evergreens are always so; and what made our pussy willows.

At the second meeting, on Thursday afternoon, Supt. Charles Lose, of Williamsport, read a helpful paper on "Outdoor Books for the Teacher," showing that no other kind of reading does so much to invigorate

the weary mind and to put the teacher into proper attitude towards the work in hand. All worries disappear when one is deep in the pleasures of Thoreau and Burroughs. The following list has been tested and approved by Superintendent Lose:

SOME OUTDOOR BOOKS AND THEIR WRITERS.

New England: Henry David Thoreau—*Walden Pond*, Excursions, Week on the Concord and Merrimac, Cape Cod, etc. Bradford Torrey—Birds in the Bush, A Rambler's Lease, The Foot-Path Way, Footing It in Franconia, Nature's Invitation, etc. Frank Bolles—The Land of the Lingering Snow, From Blomidon to Smoky, At the North of Bear Camp Water. W. C. Prime—I Go A-Fishing, Among the Northern Hills, Along New England Roads. Rowland E. Robinson—Uncle Lisha's Shop, Sam Lovel's Camps, Danvis Folks, etc. Sarah Orne Jewett—The White Heron, The Queen's Twin, The Mate of the Daylight, etc.

New York: John Burroughs—Wake Robin, Pepacton, Winter Sunshine, Locusts and Wild Honey, etc. Charles Dudley Warner—In the Wilderness. P. Dewing—Adirondack Stories.

Pennsylvania: C. C. Abbott—Rambles of a Naturalist About Home, Travels in a Tree Top, Clear Skies and Cloudy, etc. George W. Sears ("Nessmuk")—Wood Craft.

Georgia and the South: Joel Chandler Harris—Uncle Remus Stories, On the Plantation, Aaron in the Wildwood, etc.

Florida: Hugh L. Willoughby—Across the Everglades.

The Mississippi River: Samuel Clemens ("Mark Twain")—Life on the Mississippi. Lafcadio Hearn—The Story of Last Island.

The Plains and the Rockies: Hamlin Garland—Boy Life on the Prairies, etc. Washington Irving—*Trip on the Prairies.* Francis Parkman—*The Oregon Trail.* Theodore Roosevelt—Ranch Life and the Hunting Trail, The Wilderness Hunter, Hunting Trips of a Ranchman. Ernest Thompson Seton—Wild Animals I Have Known, Lives of the Hunted, etc.

West of the Rockies: Clarence King—Mountaineering in the Sierra Nevadas. John Muir—Our National Parks, etc. V. L. Stevenson—The Silverado Squatters. Theodore Winthrop—The Canoe and the Saddle.

The South West: Charles F. Lummis—Some Strange Corners of Our Country, The Land of Poco Tiempo, etc. Mary Austin—The Land of Little Rain.

North of the United States: Casper Whitney—The Hunt for Musk Oxen. Jack London—The Call of the Wild, etc. Hamlin Garland—The Trail of the Gold Seekers. Dillon Wallace—The Lure of the Labrador Wild.

The Caribbean Sea: Fred. A. Ober—Camps in the Caribbees.

The South Seas: Robert L. Stevenson—In the South Seas, Vailmia Letters. Herman D. Melville—Typee, Moby Dick.

South America: Charles Darwin—*Voyage on H. M. S. Beagle.* Henry W. Bates—Naturalist on the River Amazons, etc.

England: Gilbert White—*Natural History of Selborn.* Isaac Walton—*The Complete Angler.* Richard Jeffries—The Game Keeper at Home, The Red Deer, Wild Life in a Southern County, Round About a Great Estate, etc.

Scotland: Hugh Miller—*My Schools and Schoolmasters,* etc. John Wilson ("Christopher North")—*Noctes Ambrosianae.*

India: Rudyard Kipling—The Jungle Books (First and Second).

Egypt: Amelia B. Edwards—A Thousand Miles on the Nile.

The Sea: Richard Dana—*Two Years Before the Mast.* Rudyard Kipling—Captains Courageous. Frank T. Bullen—The Cruise of the Cachalot, The Log of a Sea Waif, etc.

The Mountains: Edward Whymper—Scrambles Amongst the Alps. Travels Amongst the Andes. Stewart Edward White—The Mountains, etc.

Miscellaneous: Clarence E. Edwards—Camp Fires of a Naturalist. William Earl Dodge Scott—Story of a Birdlover. Frank M. Chapman—Bird Life, etc. John H. Comstock—Insect Life, etc. Henry Vandyke—Little Rivers, Fisherman's Luck, etc. W. J. Holland—The Butterfly Book.

The next paper by Miss Cora A. Smith, of the Erie High School, was an effort to relate the history of "The Cornell Nature Study Movement" with the present needs of the State of Pennsylvania.

CORNELL NATURE STUDY MOVEMENT.

When a man desires to enter upon a new undertaking it is economy of time and energy for him to study similar undertakings, and to discover, if possible, the secret of their success. Then he may proceed to build upon an already tested foundation. This is progress—the heritage of us all, and to which we all long to contribute. As with individuals, so with the state. If we of Pennsylvania desire to enrich the lives of our children by giving them the opportunities of nature-study, we are privileged to examine into the ways and means which have succeeded elsewhere. And so the Cornell Nature-Study Movement cannot be ignored. The history of the beginning of this movement, its methods of work, its publications, its relations with the boys and girls and with the teachers of New York State, form an inspiring chapter in that states' educational development. One is filled with deep admiration, and I may say genuine respect for the men and women whose hearts and minds have been so filled with the truth and with the knowledge of how to present it. In our effort to make clear just what this movement has been, and is at the present time, we have consulted freely the numerous expressions of Professor Bailey, the original inspiration of the movement, who seems to have had the insight of a prophet combined with most extraordinary energy, and we have consulted personally Mrs. Comstock, and Mr. John W. Spencer, whom the children fondly call Uncle John.

In our opinion there is nothing in our nature literature that approaches the skill with which these great teachers have presented their subject. They have labored to produce in the hearts of the children the love which they themselves feel for "the world of things as they are." Nothing which has occurred in the history of New York is destined to bring greater results than the work of Professor Bailey, Mrs. Comstock and Mr. Spencer. They are thinkers, scientists, teachers and above all, lovers of children. The movement started not from within the University, but from the people of the state, through their granges and horticultural societies. The year 1893 was one of depression in general, and

to agriculturists in particular. In the institutes and granges the farmers talked of the lure of the cities which was drawing away the youth and strength of the county districts, and they decided that something must be done. The College of Agriculture at Cornell was asked to undertake the task. Money was forthcoming—not so very much at first—only about $8,000. But as the work progressed the law makers at Albany considered it well worth while, and appropriations were increased.

The avowed object of the nature-study movement was to teach the young people of rural communities "to love the country better and to be content to live therein"; to create a larger public sentiment in favor of agriculture, to increase the farmer's respect for his own occupation—which is the fundamental solution of the so-called agricultural question. The farmer who sees things and draws inferences from what he sees, will have a liking for his surroundings. In fact, nature-study is a necessity to the successful agriculturist, although the observing, experimenting farmer of the old days didn't call his study of conditions by that name.

The first appropriation was expended partly in paying lecturers to visit institutes and schools. The publications began in December, 1896, leaflets for the teachers, and a little later the Junior Naturalists' Monthly for the children. The first constituency was secured by sending instructors with the State Teachers' Institute. Many rural schools were visited. The teachers were found to be willing to introduce nature-study, but they simply did not know how. And so readable leaflets on teachable subjects gave the teachers the point of view. The current expenses for the present year will give an idea of the cost of the publications and their distribution. Of the home nature-study course they are sending out to teachers and training classes an edition of 6000 copies, the printing and mailing of which costs about $150 for each one of the four numbers, or about $600 for the year. The Rural School Leaflet is sending out editions of about 70,000 copies of the smaller leaflets to the children, monthly at a cost of about $150 for each edition. Salaries for workers, postage for correspondence, and a sum for the purchase of books, with incidental expenses, come within the appropriation.

The point of view of the Cornell Nature-Study Bureau has been expressed by Professor Bailey. He said at the beginning: "Nature-Study is the acquirement of sympathy with nature, which means sympathy with what is. The first essential is to *see* what one looks at. It is positive, accurate observation. The second essential is to understand *why* the thing is so, or what it means. The third essential is to desire to know more—and this comes of itself, and so is unlike much other effort of the school room. The final result should be the development of a keen personal interest in every natural object and phenomenon." "To improve agriculture," says Prof. Bailey, "is the purpose of our nature-study, We believe that the most fundamental thing we can do is to give a new enthusiasm to the coming farmer."

The leaflets attempted nothing more than to say something concise and true about some common thing, aiming also by pictures and questions to send the reader to nature for the purpose of making his own observations. The first leaflet was written by Professor Bailey and was called, "How a Squash Plant Gets Out of the Seed." A botanist criticized the title and said it was misleading: it should have read "How the Squash Plant Gets Out of The Integument." Herein is the key of the whole situation. The Cornell Nature-Study Movement stands for *seed,* not for *integument.* On the first page of this first leaflet is a picture of a little squash seedling unfolding its first leaves. The whole leaflet is full of pictures of little squash plants opening up to the light in the most puzzling fashion. Then it says: "If one were to plant seeds of a Hubbard or Boston Marrow Squash in loose warm earth in a pan or box and then were to leave the parcel for a week or ten days, he would find upon his return a colony of plants like the picture. If he had not planted the seeds himself or had not seen such plants before, he would not believe that these curious plants would ever grow into squash vines, so different are they from the vines which we have in the garden. This itself is a most curious fact—this wonderful difference between the first and the later stages of all plants." And all the way through he refers to "the *curious* squash plant." A country school teacher with a grain of curiosity in her soul couldn't help getting some squash seeds and trying to get those funny little seedlings for herself. Which is exactly what happened.

He later wrote another leaflet entitled "The Birds and I." It begins, "The springtime belongs to the birds and me. We own it! Another, entitled "The Burst of Spring," begins "Spring is Coming! The buds will burst and the birds will sing." These leaflets show the living enthusiasm of Prof. Bailey. As the result of these and more than a dozen others, written by various people connected with the Nature Bureau between the years 1896 and 1901, 26,000 teachers of New York were on the mailing list at their own request. New York had 29,000 teachers at this time. How did the teachers use these publications? As they pleased. It was recommended that they catch their spirit, and then set the pupils to work. It was not designed that this work be part of the curriculum, but rather that it supply enthusiasm for the school. It was not all, that the leaflets were sent to applicants. They were accompanied with invitations to personal correspondence. For example, in the first leaflet—the one about the squash—was a *letter to the teacher,* reading: "This is the first of a proposed series of leaflets designed to suggest methods of presenting nature-study upon commonplace subjects. This is a new field of effort for the College of Agriculture and we therefore look upon the methods as largely experimental. We are endeavoring to determine the best way of interesting children in country life. You can give us many

suggestions and we should like a full expression of your opinions and experiences. It should be borne in mind that the object of these lessons is not to impart direct and specific information, but to train the child in the powers of seeing and inquiring." The school teachers were proud to be a part of the movement, and entered into it with a will.

The original *Teachers' Leaflets* on *Nature Study*, as they were called, were followed by what was called the Cornell Nature-Study Bulletin. Each number of this contained a lesson for the teacher, and for the children, under the title of Junior Naturalist Leaflet, which was followed by "Notes for Junior Naturalists," and written by Uncle John, all published under one cover. For example, the first number of the Bulletin, in June, 1899, contained a most readable and profusely illustrated article on A Summer Shower, by Professor Tarr of the University, followed by a story of "Little Hermit Brother, the 17-year Cicada," by Mrs. Comstock, written like a fairy tale and yet strictly true, every word, with "Queries for Sharp Eyes" at the end of the story; and here was where her skill was shown. At the end were notes by Uncle John, including the list of clubs in the state at that time, giving the town, the president, the secretary, and the treasurer. When Charlie Langenberger, of Skaneateles, and Eddie Orcott, of Phœnix, read their names, their eyes sparkled, without doubt. The parts of this bulletin were separated before many months, giving the teacher and the children more specific attention, Mrs. Comstock giving her time to the teachers and Mr. Spencer to the children. They were then called "The Home Nature-Study Course" and "Junior Naturalist Monthly."

This organization of the children into what were called "Junior Naturalist Clubs" was the secret of the success of the whole movement, the idea being to get the children to do something for themselves, taking the responsibility from the teacher. Professor Bailey illustrates the value of this feature of the work. He says: "I prepared a leaflet on 'A Children's Garden.' Very little result was secured from the use of the leaflet until Uncle John began to popularize it, making appeals to teachers and children by means of personal talks, letters and circulars, and meeting the children in their own phrase. The result was that in 1906 they had the signatures of 33,000 children asking for instruction in gardening. They sent them six illustrated supplements telling about the manual side of gardening and the reasons why there is fertility in tillage and kindred subjects, at the expense of about four cents per child for the school year."

These clubs belonged to the children themselves, each member receiving a copy of the Junior Naturalist Monthly every month, for which he paid dues twice a month in the form of a letter to Uncle John, or perhaps a drawing, but always uncorrected by the teacher. The letters came into the home office by the hundreds, each payment of dues being checked up on the member's card, and those who met their obligations promply received a Junior Naturalist button. To Uncle John the children wrote with perfect confidence and freedom. Once he received a letter which ran: "Dear Uncle John: I am going to bust up your club. Yours truly, Mike McA." Uncle John wondered and wrote to the teacher inquiring what was the trouble. She replied that Michael was a disgruntled candidate for office. After a few days another letter came saying: "Dear Uncle John: I am sorry I wrote that letter. I shall not bust up your club. I could not bust up your club if I wanted to." Mike received a letter from Uncle John and they have been good friends ever since. Each club has a wonderful charter of which it was very proud. It had a design of the Cornell University Library on one side of the page and a rural school on the other side, with pigeons carrying messages back and forth. It bore also the large red seal of Cornell, which was by far the brightest spot in the school and the cause of much admiration.

The monthly publication suggested by means of information and questions and pictures the themes for their letters. The children were eager to begin their letters, to tell the burning thoughts of what they had learned of crickets, the turkey at Thanksgiving, frogs and frogs' eggs in the spring, or of their glorious air-castles of what they were going to have in their gardens. It was not necessary to give Nature-Study under this plan a special period. The club meetings were held at odd times. Perhaps for ten minutes after roll-call in the morning. The president steps to the teacher's desk and calls the meeting to order. The secretary reads the minutes of the last meeting. The teacher can really manage the thing, but the children think they are doing it. It is safe to say that these clubs have been the secret of the success of the whole movement, because they have taken the responsibility away from the teacher; Mrs. Comstock, with her leaflets for the teachers, full of information by word and by picture, suggesting questions and making the whole matter a pleasure; and Uncle John keeping each child fascinated by his personal attention —altogether a marvellous undertaking, attended by success far exceeding any original hopes.

Three years ago the Department of Agriculture at Cornell changed its point of view somewhat. They realized that the work of awakening nature-sympathy in the rural schools, as well as in many city schools, had been acomplished. Their efforts in directing pupils and teachers to the pleasures of country life had availed. The time had come for more special work. The Teacher's Leaflets, or the Home Nature-Study Course, would be continued in order that teachers following the Nature-Study Syllabus of the Department of Education might be further helped. The Junior Naturalist Monthly has been discontinued. A new publication "The Cornell Rural School Leaflet," edited by Miss Alice McCloskey, is now being issued for the teachers with a separate supplement for the pupils. This is primarily for the rural schools, though

very helpful to city teachers as well. The clubs have been discontinued as clubs, unless the teacher especially desires it. Teachers are asked to help by suggesting ways best adapted to conditions. Each teacher desiring the Rural School Leaflet fills out a blank provided, asking for names of the teachers and of each pupil in the class. Each pupil is asked to prepare every month a composition on some subject of the Leaflet. The teacher is asked not to correct these papers. The children are unconsciously acquiring the habit of turning to specialists for information which they can secure from school books. They may write to Uncle John, to the College of Agriculture, or to the professors who write the articles in the leaflet. In each issue of the leaflet are four or five topics along different lines, from which the teacher may choose those best adapted to her community. There will be lessons in earth study, animal study, plant study, insect life, bird life, and the like. School gardens will form one of the most important feautres, because there the life processes may be studied. One hour spent in actual gardening will put a child more nearly in touch with his environment than many hours spent with specimens brought into the school room.

This Rural School Leaflet is destined to become the direct route to the teaching of agriculture. In time it will become mainly an agricultural magazine. To have the teacher and each one of the pupils in the school to receive periodically from the University a paper brim full of interesting information and pictures about common every-day things must indeed, produce a happy school. For example: The late numbers of the Leaflet, for both teacher and pupils, are full of information about and problems for the study of Corn, in preparation for Corn Day, which is to be celebrated by the rural schools of New York on January 28th of next year. This day was established two years ago by the Department of Agriculture at Cornell, and the enthusiasm in the rural schools is exhilarating. The paper contains full directions for the celebration of the day, invitations, plans for exhibits, and corn recipes for the girls to use in preparing entertainment for the guests. In the teacher's edition is an article on "The Corn Plant," by Mrs. Comstock, followed by a set of twenty or more "observations" to be made by the pupils, with many questions, like "What are the points for judging a perfect ear of corn?" and "How many varieties of corn do you know?" Then follow some more articles about corn, written by professors, "Why we Raise Corn," and another "Testing the Germination of Seed Corn." Surely we should like to be present at one of these Corn Day Exercises in a New York Rural School.

No teacher in New York is obliged to follow out the state Syllabus in Nature-Study for Elementary Schools. She undertakes it if she cares to do so, and she is given a great deal of help if she will but use it. She has, or may have for merely the asking, The Home Nature Study Course Leaflets, by Mrs. Comstock, and loaded with interest, The Rural School Leaflets for herself and pupils, and for the price of the postage, the bound volume of all the leaflets issued by the Nature Study Bureau from the beginning; in addition to personal correspondence with the authorities in the Department of Agriculture. And besides all this, Mrs. Comstock has been writing a book on Nature Study for teachers full of suggestions, with lessons carefully planned. This book was to have been out this autumn, but I think it is not yet finished. Surely all that a New York State teacher needs to become a teacher of agriculture is the inclination to avail herself of opportunities offered by the state.

The Cornell plan has been to build gradually a foundation in the minds of the boys and girls and the teachers of New York state, who have taken up the work merely because it was so attractive that they could not resist it—a purely voluntary matter. This has been going on for fourteen years. The perfect co-operation of the State Department of Education has been a great factor too. They have given help but have not forced reforms, rather letting the Cornell people work out the question of Nature Study and agriculture in their own way—which was to make it entirely optional, meanwhile arousing interest. Nature Study is not optional, however, in New York in normal schools and training classes. There we see definite required work. But among teachers who have gone into the profession, it is entirely voluntary.

Compare the state of mind of the 26,000 New York teachers to whom in 1901 were sent Cornell Nature Study Leaflets at their own request, with that of the 20,000 teachers of the State of Illinois who, if the papers are to be believed, are soon to be forced into the study of botany and soil chemistry. Also compare the probable effects of the teaching of many of these 20,000 teachers upon the poor children of the State of Illinois, with the gradual nature sympathy acquired by the children of New York under the instruction of Mrs. Comstock and Mr. Spencer. And the reason they are appropriating the $100,000 out in Illinois, according to the papers, is because they think their farm lands will soon be worn out, so the school teachers must get into shape and prevent this awful calamity. New York's idea was by a natural process to make country life attractive to boys and girls so that they would like to remain there, and would have honest pride in their occupation. And so Professor Bailey has been arousing the older people by means of the beautiful magazines for which he has been responsible, Country Life in America, The Garden Magazine, and Suburban Life, and others; and the children he has succeeded in arousing so that they love created things.

But what about our own state of Pennsylvania? Surely, we are feeling the need of giving our boys and girls the nature-sympathy which will make them happier men and women. Our farmers are alive to the situation. Just last month the Grange of Harbor Creek, in Erie County,—John Gifford, Master

—sent a communication to the school directors which reads as follows: "Gentlemen: As the general tendency of the educational world of to-day is to give more practical knowledge to the pupils of the public schools, and as this is particularly needed in the rural districts so that children in the country may be educated for the country and not solely for the city; and believing that this end can be best attained by creating an interest in the study of nature and the many interesting problems she presents, we most respectfuly request that "Nature Study" may be given a prominent place in the schools of this Township to the end that our young people may be equipped for, and more interested in that greatest and grandest of all occupations, the tilling of the soil, and the growing therefrom of such products as make the very foundation of material prosperity. And we assure you of our hearty co-operation in such methods as you may deam best, to bring about this much desired result." Doubtless there are many other Granges in Pennsylvania in the same state of mind, but practically helpless as matters are now.

Why can we not have an appropriation which would make it possible for our College of Agriculture to do this work? Why not have a State College Nature Study Bureau? New York did it with only $8,000 in the beginning. We could do it on even less, if necessary, at first. We have educators, farmers and other people enough who see the value and possibilities of the undertaking. And we have our own Professor Schmucker, within our own borders, a veritable Uncle John. He knows the boys and girls, and they love him.

We should ask—not that the teaching of nature-study be made compulsory in our schools, but that an appropriation be made which shall enable our College of Agriculture to come to our boys and girls, and so to the farmers themselves. Let us study carefully and imitate the work of our sister state. We shall need leaders, but there are leaders somewhere for us. We must find them.

Professor Watts, of State College, made the last address of the afternoon. He said that State College is ready and waiting to do all in its power to further the interests of Nature Study in the State. Lack of appropriation by the Legislature is all that stands in the way. He then told with enthusiasm of things common to the country boy which are full of interest for him if he can only see them. These make the farm alive with interest and enjoyment.

The Round Table adopted the following:

Whereas: we believe Nature Study to be the foundation for elementary science, and agriculture; and whereas, there is great interest shown in Nature Study by many of the teachers of Pennsylvania; and whereas, teachers find difficulty in securing literature and helps for teaching Nature Study: Therefore be it

Resolved, That we favor the enactment of a law, giving a special appropriation to State College, to carry on through its extension bureau the teaching of Nature Study throughout the State.

The efficient officers, President L. J. Ulmer, of Williamsport, and Miss Cora A. Smith, of Erie, as Secretary, were continued for the ensuing year.

BOOKS FOR CHILDREN.

"Choose a book for children," says Ruskin, "for what is in it, not for what is out of it; for some good, or worth, or dignity, not because it is harmless."

It's rather a good point to make, isn't it? Many of us are apt to take the negative view when choosing children's literature. We do not want this or that. A book must not have such and such a quality. We are not apt to throw our "don'ts" to the wind and come out positively for what we do want. We are timid. We go negatively.

Yet it isn't what a book lacks, but what it possesses, that makes its appeal to a child, and has the power of influencing him. How much wiser, therefore, to choose a book, as Ruskin says, for some ideal for good, or worth, or dignity, that will have effect in moulding the child's character. If the child lacks courage, give him books with red-blooded heroes, clean men, of course, men to idealize, but, nevertheless, men whose courage is not questioned. Unconsciously the little reader will pluck up heart and grow valiant. If a child is cruel, let his or her books tell of gentle men and women, who yet are fine and worthy of hero-worship. If the youngster is too quiet, too inclined to stay indoors, let his reading be of the fascinations of nature. But in each case give him something in his reading; a positive good, not a mere lack of evil.

What a child shall read is often a puzzling problem to conscientious parents. A little dip once a week, possibly with the mother as guide, into Stevenson's "A Child's Garden of Verses," will prove enjoyable to many a child. Two small boys of a certain family eagerly await Sunday afternoon when the mother reads to them one or more of these poems, after which they all fall to talking about what has been read.

A list of books for boys published recently included, of course, Andersen's and Grimm's Fairy Tales, also "Plutarch Lives"; Twain's "Tom Sawyer," and "Huckleberry Finn"; "Cadet Days," by King; "The Adventures of Buffalo Bill," by Cody; Robinson Crusoe; "Sherlock

Holmes"; "Treasure Island" and "Kidnapped," by Stevenson; "Crimson Sweater"; "Behind the Lines," and "Halfback," by Barbour; "Jack Among the Indians," by Grinnell; Scott's "Ivanhoe"; "Captains Courageous," by Kipling; "The Leatherstocking Tales," by Cooper. Any librarian, too, will help parents out in choosing books for children.

Right food for the mind is as important as right food for the body, and parents who maintain no oversight over their children's reading are doing these children a great wrong. The bias of life may be given by the books a child reads. Even if the effect is not quite so serious as this, harm may be done that will take years to mend, or, on the other hand, the coming years may be made happier and more full of usefulness because of inspiring reading.

And not only should a child be given good reading, but a taste for reading should be cultivated. Sir John Herschel's prayer is worth considering: If I were to pray for a taste that would stand by one under every variety of circumstances and be a source of happiness and cheerfulness to me through life and a shield against its ills, however things might go amiss, it would be a taste for reading."

THE BEST OF LIFE.

TWO men of middle age made at different times a visit to a mountain village remote from the path of travel, and separated by the estranging mountain ranges from the activities of the world. One man made a report on the people which placed them among the abandoned. He said that the storekeeper of the place was a villainous curmudgeon, who placed scant value upon the cardinal virtues. The postmaster was a vulgar and brutal animal, who studied to disoblige the people. The guide was a rascal who maltreated his family. The stage driver was a brute who could not drive. The women of the village were obnoxious barbarians, who should not be at large. Their voices were shrill and repellent; their complexious were bad; their cooking was infernal, and, altogether, the village and the people were a blot on the map; they cumbered the earth, and were a living testimony to the truth of the doctrine of original sin.

The other visitor made a different report. He said that the storekeeper, though a rough and ready man, had displayed the finest of the rugged virtues when the village was visited by a dangerous contagious disease a few years ago. The postmaster, he said, was noted for his harsh and raucous voice, and bellowed at his customers and all the people in a semi-humorous, serio-comic manner, which might be mistaken by a stranger who did not understand him as an exhibition of ill nature and roughness, but as a matter of fact the people trusted him and believed in him as a loyal and stanch friend, who had been known to make the readiest sacrifices when called upon in a good cause. The guide of whom evil report had been given was a hero for the whole region, because he had displayed the rarest courage and fidelity when put to the test, and the women of the village, who endured lives of hardship and self-abnegation, were living and inspiring examples of a pertinacious devotion and courage which would have done honor to any cause and any age.

The explanation of the diametrically opposed reports is to be found in the difference in the character and temperament of the men who observed the community. One went there with a jaundiced mind and soured spirit, and he saw nothing but evil. The other went in generous mood and with open mind, searching for the best, and he found nothing but beauty and virtue.

The strange thing about human beings is this: That those who look for the evil can find it, because human beings are a mixture of good and evil. In some the virtue predominates and in some the evil has the upper hand, but few living human beings are without some fine qualities. He who looks for the bad will centre his gaze upon it and fail to see the good, though it outweigh the evil. He who looks for the best will find the good, at least, and will get a truer view of mankind. The same rule holds true as to life. The world is largely what we make it ourselves. Myriads go through life with an obscured vision and a dark outlook, just as some men go along, day after day and year after year, with their heads down, oblivious of the beauty of the sunset, the splendor of the clouds, the infinite loveliness of the foliage and landscape, the charm of the fresh May morning, the delight expressed by animated nature. They see only the obstacles on the footpath. The tracery of the dew on bush and grass suggests no thought save the possibility of getting wet feet. The contours of vale and hill mean simply the work of climbing acclivities. The sunrise suggests merely the heat of midday, and the subtle melancholy of falling night raises in their minds only the thought of the expenditure to be made for lighting the house. The poet Wordsworth's message to them is nothing:

"For I have learned
To look on nature, not as in the hour
Of thoughtless youth, but hearing oftentimes
The still, sad music of humanity.

Nor harsh nor grating, though of ample power
To chasten and subdue. And I have felt
A presence that disturbs me with joy
Of elevated thoughts; a sense sublime
Of something far more deeply interfused,
Whose dwelling is the light of setting suns,
And the round ocean, and the living air,
And the blue sky, and in the mind of man;
A motion and a spirit that impels
All thinking things, all objects of all thoughts,
And rolls through all things."

There is much woe in the world. Some of it is ineradicable, apparently, but it would astound many a wretched human being to learn how much of the misery is purely imaginative and easily avoidable. Health and strength, means and circumstance, fortune and fate play their parts, undoubtedly; but when all is said, a great proportion of what is called misfortune is due to the false and narrow view which the individual takes of life, and to his inability or disinclination to grasp that which is lovely and of good report within his reach. The aim should be to shun the pessimist and pessimism. Dryden summed up the philosophy of defeat and disappointment in these lines:

"When I consider life, 'tis all a cheat.
Yet fool'd with hope, men favor the deceit;
Trust on, and think to-morrow will repay.
To-morrow's falser than the former day;
Lies worse, and while it says we shall be blest
With some new joys, cuts off what we possest.
Strange cozenage! none would live past years again.
Yet all hope pleasure in what remain;
And from the dregs of life think to receive
What the first sprightly running could not give."

Macaulay says that scarcely anything finer can be found in the range of literature than these lines. He is right when he appraises them as a strong, brilliant example of literary expression, but as philosophy they are inconceivably depressing. There is one strange thing about this philosophy, that it is true for those who adopt it because it brings misery and unhappiness, while those who reject it and look for the best and cherish hope find that it is utterly false and base.—*Ledger.*

LITERARY SAHARAS.

"Most homes," says a teacher in a Pennsylvania normal school, "are literary Saharas, so far as children's books are concerned, and it is the parents' fault." Yes, it is the parents' fault, and one that teachers and those who come into contact with "other people's children" only occasionally cannot be expected to do much to correct. The pity of it is that children's books, both good and readable, are now almost as plentiful as books intended for older people. And yet the literary Sahara persists in many a home.

Sometimes the children are not encouraged to read at all, but are allowed to grow up with a positive aversion for books. In other cases the encouragement may not be lacking, but proper discrimination is. The child is allowed to read anything and everything, and that's as unfortunate as if he were not encouraged to read at all. The proper and wise development of youthful literary tastes is likely to fare quite as badly in a sea of unworthy books as in a literary Sahara.

Parents who do not know what their children read, and do not care, are altogether lacking in a proper perception of their duty. A little helpful guidance will really work wonders.

It is also very largely the teacher's fault as there is so little instruction given to inspire a love of reading. The average teacher is seldom broadly read or has any deep love for literature. Hence in our schools very little attention is paid to English composition or to any notice of English classics. The boy and girl graduate, and become in time parents. Never at school being led in gentle paths to know what standard literature is, or having imbibed no love of reading on any line, it stands to reason they are not likely to be carefully inclined to bring up their children in a different line from their own.

Hence the great carelessness parents show in regard to such books as their children bring to the home. If it is not an entire Sahara, it tolerates what is poor and foolish in current writings and actually much that is harmful. If early training in the schools properly fashioned the mind of the coming parent, a taste for good reading would be planted in the youthful mind so that it would grow and produce fruit.

It should be remembered that a love of reading is not an inherent desire. A few boys and girls take to it naturally, but the great majority have to be led into it, as they are in ordinary school studies. Few children take an interest, by natural impulse, in arithmetic, geography, grammar, history and so on, but if properly taught they soon learn to like them and become ardent students therein. So it is with literature. If a boy or girl gets no inkling of it, if the best books are not mentioned to them, if interest is not aroused at home or school, how is either to have any knowledge of it?

If the ordinary students are not taught how would that boy know anything about them? So you cannot teach a boy what is a good or bad book or inspire a love of reading unless he is brought into contact with the best in literature either at home

or school. Hence the importance of having more of English composition, and the best in English thought, claiming a conspicuous place in school studies.

The boy can do without grammar if he reads Shakespeare; without so much arithmetic if he reads Walter Scott; without so much geography if he learns to love our American classics—say, Cooper's wholesome stories mixed with much important American history. If you wish culture it must be taught the youthful mind. When it is, there will be few literary Saharas to complain about.

Even the old school books that used to be everywhere are not now found in the homes of the people, though in many ways the schools have been much improved. The district now lends books to the pupils ("free books") and calls them in at the end of the school term. A school book that a pupil has used faithfully should always be given to such pupil as personal property.

TWO GREAT SCHOOLS.

THE editor recently spent some time inspecting the class work in two great institutions, the University of Wisconsin and Tuskegee Institute, the famous school established by Booker T. Washington at Tuskegee, Alabama, for the education of negroes, and in which all the teaching is done by negroes. In many of their features the two institutions present striking contrasts, but perhaps in no respect do they differ more widely than in the quality of the teaching; and in this respect the Negro school has a very decided advantage. The skill shown by the teachers at Tuskegee is incomparably greater than that of the teaching force at the University of Wisconsin.

At Tuskegee, when a student recites he stands erect, and says something that has a definite beginning, aim and end; and he makes his statements without interference or help from the teacher. Then he is quizzed *by the other students.* At Madison, the students do not stand to recite, and many of them do not sit; they loll or loaf in a half reclining position. As a rule, if any recitations are made they are read from the note book in the hand of the student, but most of the alleged recitation work is done on the co-operative plan; the teacher and the student collaborate to produce a result, the student's contribution to which in many cases is limited to "yes" or "no," or at best consists of finishing out a sentence which the teacher has almost completed, the teacher not infrequently responding with approval, "*eg*-zactly," or "very good." When a student begins a recitation *de novo*—a rare occurrence—he usually introduces it with "Why" or "Well" and often closes with the rising inflection.

Some of the instructors in the University of Wisconsin have a trick of reciting to the visitor. To illustrate: A teacher in charge of a part of the awkward squad, freshmen who had spent a half year in the University, tried for eight or ten minutes to pump water from dry wells, but even the fragmentary, co-operative style of recitation was dragging in a most distressing manner, although the lesson was only a simple exercise in the correction of false syntax from a text-book assignment. The teacher switched off adroitly to a talk on the vowel changes in "strong" and "weak" verbs, and how sit, sat, sat changed to set, set, set, and why lie, lay, lain do not follow the same law of vowel changes as lay, laid, laid. Anglo-Saxon forms, vowel substitution, "weak," "strong," causative, etc., etc., fell glibly from the lips of the instructor in a continuous recitation (evidently to impress the visitor) while the students showed from their countenances that they were entirely unhit. There was no doubt in the visitor's mind that the instructor was "onto his job" in his own knowledge of certain phases of English, nor that ninety per cent. of the class which he was teaching (?) were unable to use correctly the forms of sit, set, lie, lay, rise and raise.

Something should be done to improve the quality of the teaching in the University; it has become so inexpressibly bad that nothing short of drastic measures can remedy the evil. We suggest two possible means of treating the case: Assuming that the instructional body employed in the Department of Education is made up of expert teachers, or persons who know good teaching when they see it,—a rash assumption—they might be relieved entirely for a year at least of all class work with students and set to work as inspectors of the teaching done by the rest of the Faculty. Then regular meetings of the instructional force should be had an hour a week or oftener at which they should be taught how to teach. Or, each member of the Faculty might be required to take a year off and go to some good normal school to learn how to teach. Even visiting and observing the work done in a few good high schools would help these professors, if undertaken and followed up in a spirit of open-mindedness with a genuine desire to learn; better still would be a few months at a school like Tuskegee Institute, where real artists in practical

pedagogy may be seen at work. Let no one doubt for a moment that this suggestion is made in perfect sincerity. When we were at Tuskegee a member of the State Board of Education of Massachusetts was there carefully examining every feature of the institution; it was his second visit, and he was planning to stay several days. He was making notes and gathering all available data to carry back for the improvement of the educational system and practice in the old Bay State. The University of Wisconsin needs a pedagogical reform much more than does the State of Massachusetts. —*American Journal of Education.*

EDITORIAL DEPARTMENT.

THE SCHOOL JOURNAL.

LANCASTER, MAY, 1911.

N. C. SCHAEFFER. - - - - J. P. McCASKEY.

IT was expected that the School Code would be through the Legislature, approved by the Governor, and the law under which the election of Superintendents would be held this year. *The Journal* has been delayed for two weeks with the purpose of presenting a synopsis of the School Code in this issue. But there have been so many delays and changes, and the bill has gone back so often to the committee and to the printing office, that our June number must show the final result of this prolonged deliberation. The proposed act is probably the largest and the most important that has ever been under consideration by the Legislature of Pennsylvania. Much matter relating to the election of Superintendents that would have appeared in this number has been omitted because of this delay.

AMONG the "items" in this issue is a fine idea in the West Chester report—the "trained librarian with the spirit of the teacher." What an opportunity for the right person to impart the greatest gift of education—the habit of *going on* by reading and study and delightful mental occupation up the slopes of the higher life! Great thoughts—to standardize the thinking of the growing and *starving* mind; lofty ideals—to stimulate effort and nourish the ambition of the young dreamer; and noble sentiments—to warm the heart, quicken the sympathies and refine the crass material of nature for the spirit's uses; yea, and the "power of knowledge" too—all these and more are to be had for the seeking in our incomparable literature. Whatever teacher, or whatever agency, directs the pupils of our schools in this way, gives them the pearl of great price out of our educational treasure house.

THE New York *Sun* says that on the East Side of New York there is no more popular book, either in the libraries or as a good seller, than the Bible. One branch of the popular library alone owns fifty copies, and these are constantly in circulation. After the Bible the most popular copyright books are those of Scott, Dickens and Bulwer.

SOCIAL life at the United States Naval Academy, as reflected in the Academy hops, was recently investigated by the Navy Department in order to uncover a case of snobbery. The investigation was based on the complaint that Miss Mary H. Beers, daughter of Professor Beers, head of the English department of Yale, was a recent victim of snobbery at the academy. It is said that Miss Beers' escort at a hop was given an intimation by a midshipman that her presence there was not desired because of her position as a governess in the family of Lieutenant Tarrant, of the Navy. The investigation was the result of a request of Congressman Korbly, of Indiana. He asked the Secretary of the Navy to investigate "that peculiar social system at the academy that makes unwelcome at a social function an estimable and talented girl who happens to be earning her own living." The snobs were properly rebuked, and ample apology offered for their bad manners.

THE boy who desires to enter college and the boy who desires to enter business alike need to be well grounded in fundamental studies and to gain a real mastery of a few things. In a word, the same ideal of education which will send up to college competent candidates will also send into the business world well-trained beginners. This lesson is one which has to be retaught, not only to each generation of youth, but to each generation of schoolmasters. Be strong in the few fundamental branches. Get definite knowledge.

THE names of Profs. W. P. Eveland, Williamsport, and Calvin O. Althouse, Philadelphia, the latter a Life member, were received by Treasurer Keck too late

for insertion in the list of members published in the April number of *The Journal*. This makes thirteen life membership fees credited to the Harrisburg meeting ($130); 1803 members (34 life members) $1,769; total receipts, $1,899. Thirty-four bills paid to date by Mr. Keck, amounting to $1,495.77, leave a balance of $403.23.

CHANGES now going on in education, says the United States Commissioner Brown, may bring us to an interpretation of education which will mean "that modern states shall eventually see to it that any citizen of any age, who seeks instruction in any subject, shall find such instruction provided for him, according to his desires, his needs, his ability to learn; not necessarily provided in soft ways nor always at public expense, but made actually available by ways that are within his reach." The Commissioner adds that the newer plans of the University of Wisconsin venture a long way in this direction.

THE enrollment at Booker Washington's Tuskegee Institute this year is 1,712 young men and women, 221 of whom are taking the various courses in agriculture. It is a wonderful school. A new reservoir has recently been completed for the school, which is 27 feet deep and 54 feet in diameter and capable of holding 300,000 gallons of water. The reservoir will be connected to the two large pumps in the engine room and its capacity of 300,000 gallons will be about one day's water supply for the school. All the work upon the reservoir was done by students.

FROM June 26 to August 4, 1911, a very desirable opportunity will be afforded teachers in the Summer School at the Pennsylvania State College, in the lines of agriculture, manual training, natural science, home economics and liberal learning. The instructors will be thirty or more in number and are of the College faculty. The total cost of the six weeks need not exceed $35, in addition to the railway fare, there being no charge for tuition. The following resolution was adopted at the 1908 meeting of the Pennsylvania State Educational Association: "Resolved, That in view of the present day demand for teachers to instruct in Agriculture, Domestic Science, and Manual Training; and in view of the possibilities of utilizing the property at The Pennsylvania State College for this purpose; we call on the State to provide a Summer School for teachers at this institution, which shall furnish instruction to teachers in these practical subjects at the actual cost of transportation, board and lodging." The first session of this Summer School was held last year with an attendance of 147 teachers, from 36 counties. This number should be at least 400 or 500 for 1911. The advantages offered are great and the cost almost nominal. For circular of information address Dr. Samuel E. Weber, Director of Summer School, State College, Pa.

SAYS Dr. Winship: "School buildings are becoming our best demonstration of architecture. If the present pace is kept visitors will make pilgrimages to our school buildings as to cathedrals in Europe. There are several cities in California already where the schoolhouse is the chief artistic attraction."

THE first installment, in the April *Century*, of Dr. Arthur C. McGiffert's serial narrative of "Martin Luther and His Work," deals with the beginning of the conflict with Rome. Among other letters of Luther's touching on incidents of those stirring times, is quoted the following, written to Melanchthon from Augsburg, when called there by the Elector to present his case: "Nothing new or wonderful is happening here, except that the city is full of my name, and everybody desires to see the Herostratus who has kindled so great a fire. Play the man as you are doing, and teach the young rightly. I am going to be sacrificed for you and them, if it please the Lord. I prefer to perish and even to lose forever your most delightful companionship—a thing most grievous to me—rather than revoke what I have rightly said, and be an occasion of loss to the best studies. With these most ignorant and bitter enemies of literature and education Italy has fallen into palpable Egyptian darkness. For they are all ignorant of Christ and his affairs. These men, nevertheless, we have as lords and masters in faith and practice."

THE friends of the Forestry movement in Pennsylvania are gratified to know that Lehigh University has extended the privileges of a free post-graduate course to the graduates of the State Forestry Academy, located at Mont Alto. This course includes subjects such as will supplement the training at Mont Alto, and aid the student greatly in the practice of his profession. President Drinker says in this connection: "We are in a position to offer scholarships from funds with which the University has already been provided for purposes of this kind, and we know at the present time of no direction in which we would more gladly apply such funds than in forwarding the cause of Forestry in this State."

The Forestry Commission, in their grateful reply to Dr. Drinker, say: "The offer of scholarships in Lehigh University, made by your trustees through you, comes as a crowning evidence of their interest not only in the work itself, but in the young men to whom this work is to be entrusted; for it will enable them after graduation at the State Forest Academy, to round out and bring to the highest efficiency, their knowledge of practical forestry by supplemental instruction under wise direction of those eminent teachers who have already furnished so many distinguished directors of the industrial enterprises of our nation. To say that we accept your offer with a distinct sense of gratitude is a faint expression of our feelings, for it relieves us of a sense of the responsibility which devolves upon us of providing competent successors to continue the work which we have commenced."

NATIONAL ASSOCIATION.

THE N. E. A. will meet in San Francisco, July 8–14, 1911. The people of San Francisco and California are making preparations for the convention and anticipate a large attendance. A complete organization of local committees from San Francisco and California has been effected, including active workers from all parts of the State. There is a general committee of fourteen members, an executive committee of ten members and sixteen subcommittees for the various divisions of the work of preparation for the convention.

The several railroad lines from Chicago westward have made unusual concessions and very low round-trip rates have been announced. This coming meeting will afford a splendid opportunity to all teachers and others who may wish to take advantage of the low rates to visit the rebuilt San Francisco and the many places of interest in California and the West.

A study of reconstructed San Francisco, with its Golden Gate, its splendid harbor, ocean frontage, wharves and shipping, parks, markets, military reservations, old mission, public buildings, historic points and nearby resorts, will well repay the teachers and their friends for the expense incurred.

In April, 1906, after the earthquake and a three-days' fire, San Francisco was a city in ruins with its population scattered to the four winds. To have rebuilt a better and larger city than the old San Francisco in five short years is a splendid illustration of the triumph of energy, faith and determination over great difficulties and unprecedental disaster. President Wheeler of the University of California and Dr. Jordan of Leland Stanford University and other educational leaders of California have sent forth the following invitation to the teachers of America to attend this convention.

"All California invites you to the New San Francisco in July, 1911, to attend the National Education Association convention. After seeing the marvelous work of a great city rebuilt in four short years, you can make San Francisco the center for seeing California. Why not plan to attend the convention—then visit the Yosemite, the various groves of the Big Trees, the Redwood country, the Tahoe or Shasta resorts, Southern California, the great Canyons of the Sierras, or some of the many beach or mountain resorts scattered throughout our Wonderland? If you are interested in Industrial California, we shall be glad to show you our orange groves, our orchards, our vineyards, our wheat ranches, our gold mines and our forests. Why not make definite plans now for a real vacation in California? It will never be more enjoyable; it will never cost so little. The latch string will be out when you cross the California line."

The first general meeting of the convention will be held in the Greek Theatre at the University of California in Berkeley which seats some 12,000 people and which is an ideal place for such a gathering. A strong and excellent program is promised by the several committees in charge of the necessary arrangements. The numerous attractions of the City of the Golden Gate and California and the annual meeting of the N. E. A. will doubtless induce thousands of teachers and others from our eastern and central states to make a western trip this coming summer. For information as to tickets, routes, dates, programmes, etc., address Deputy Supt. R. B. Teitrick, Harrisburg, who will be glad to hear from any persons desirous of making this grand trip to the Pacific Coast.

"FRATS" IN HIGH SCHOOLS BAD.

THE Board of Superintendents of the City of New York has recently recommended to the Board of Education that secret societies or fraternities be abolished where such organizations exist in connection with public schools. It is proposed to amend the bylaws so that such societies will be prohibited, says Edward B. Shallow, associate superintendent of Brooklyn, in the February number of Teacher and Home.

This step is taken in the interest of the high schools and the pupils themselves.

Before this action was taken, the subject had been investigated by obtaining the opinions of high school principals, boards of education and others, in more than twenty-five of the leading cities of the United States. The great majority of those consulted are of the opinion that secret societies in public secondary schools are more of a detriment than a benefit to the members of such organizations. Some of the high school principals in the City of New York do not favor the existence of these fraternities in public schools, while a few of such principals approve them.

So-called Greek letter fraternities exist, and, no doubt, hold an important place in many colleges of this country. In these institutions the students are generally of such an age that they are competent to judge as to the relative amounts of time that should be given to their studies and to the fraternity and its activities. In secondary schools the students generally are not competent to make a proper apportionment of their time in this way.

During the period of adolescence, pupils should not be encouraged to band themselves together in groups, the doings of which are to be kept secret. We should try to encourage boys and girls at this time of life to cultivate broad sympathies and learn to understand their fellow schoolmates better. The school fraternity is generally opposed to this broad sympathy and fellowship.

Many boys and girls who become members of secret societies are forced to live beyond their means in trying to keep pace with other members of such organizations, in dress and otherwise. Some time ago certain high school boys were convicted of theft. It was found on investigation that these boys belonged to a high school fraternity and they were tempted to dishonesty in the hope that they could get money to dress themselves better. A false pride made them dishonest.

It seems to me that, in a public secondary school, which is supported by the taxation of all the people, such secret bands and groups are much out of place. They engender snobbishness and conceit. If boys and girls who are students in high schools must have such exclusiveness, let them not be allowed to make such organizations a part of public school life. If these things are good for secondary schools, why not have them in elementary schools?

It is argued that secret societies in high schools give great opportunity for literary work—essays, debates, etc. Such opportunities are just as great in non-secret school societies, which are open to larger groups. The work of our high schools is of such a character that it alone should occupy a larger part of a student's time. The distractions in a city like New York are so numerous that it is difficult for most high school students to concentrate their attention on subjects of high school study in a way that should produce the best results. All the doings of secret high school societies are another and a greater distraction.

WHERE ARE THE SCHOOLS?

THE United States has just passed through what is loudly proclaimed as a "banner year" for drink and tobacco and oleomargarine. Here is the nation's record for the twelve months, as shown in the figures of the Internal Revenue Bureau.

163,000,000 gallons of distilled spirits—30,000,000 gallons more than the year before.

59,485,117 barrels of fermented liquors—an increase of 3,000,000.

7,500,000,000 cigars—100,000,000 more than 1909.

6,830,000,000 cigarrettes—an increase of a solid 1,000,000,000.

402,000,000 pounds of plug, fine-cut, cube-cut, granulated or sliced smoking or chewing tobacco or snuff—4,000,000 more than the year before.

141,862,282 pounds of oleomargarine—50,000,000 pounds increase.

Illicit distilling and other manufacturing of moonshine whisky, it is reported, are on the increase, "especially," the Bureau says, "where there are State-wide prohibition laws."

The internal revenue receipts on all these things—and certain other things, such as playing cards and mixed flour—amounted to more than $289,000,000, collected at a cost of about $5,000,000, or a penny and a little more than seven mills for each dollar.

Only three other years have surpassed the year 1910 as an internal revenue producer since the Bureau was established in 1863. In 1866 while Civil War taxes were still heavy, receipts were $310,000,000, and following the Spanish War, in 1900 and 1901, they were $295,000,000 and $306,000,000.

Illinois led all the States as a producer of internal revenue. More than $49,000,000 was collected in that State. New York was second with $36,000,000; Kentucky third with $32,000,000. Indiana, Pennsylvania and Ohio followed in the order named.

Rum and tobacco go forward "conquering and to conquer." Where are the Schools and what are they doing?

OFFICIAL DEPARTMENT.

DEPARTMENT OF PUBLIC INSTRUCTION,
HARRISBURG, May, 1911

IMPORTANT INFORMATION FOR SCHOOL DIRECTORS.

UNDER the New Code every board of school directors which elected its officers in June, 1910, shall elect a president, a secretary and a treasurer as heretofore at its first meeting in June, 1911, or as soon thereafter as possible. Such organization shall continue until the first Monday of December, 1911. The terms of all school directors which expire on the first Monday of June are extended by the Code to the first Monday of December, 1911, at which time their successors who will be elected in November, 1911, will take their seats in the Board and, a new organization will be affected.

The Code divides school districts into four classes. School districts of the first class must have a population of 500,000 or more and will include Philadelphia and Pittsburg only, the former having a population of 1,549,008 and the latter a population of 533,905. The second class of school districts embraces those having a population of 30,000 or more and less than 500,000. To this class belong fourteen cities. School districts of the third class include those having a population of 5,000 or more and less than 30,000. This class embraces 11 cities, 112 boroughs and 39 townships. The districts of the fourth class include all districts which have a population less than 5,000.

COLLEGE GRADUATE CERTIFICATES.

THE following named College graduates were granted State Teachers' Permanent Certificates during the year 1910:

1979. Chas H. Sleichter, Scotland, Franklin county, Lebanon Valley College, B.S., issued January 4, 1910.

1980. Herbert J. Stockton, McKeesport, Allegheny county, Allegheny College, A.B., issued January 25, 1910.

1981. Walter P. Jenkens, Washington, Washington county, Harvard University, A.B., issued February 2, 1910.

1982. Mary Klahr, Clarion, Clarion county, Oberlin College, A.B., issued February 7, 1910.

1983. Landis Tanger, Scottdale, Westmoreland county, Franklin and Marshall College, Ph.B., issued February 7, 1910.

1984. W. L. Austin, Economy, Beaver county, Grove City College, Ph.B., issued February 17, 1910.

1985. Lynn D. Talbott, Altoona, Blair county, Syracuse University, Ph.B., issued March 10, 1910.

1986. Mildred Miller, Allegheny, R. D. 2, Allegheny county, Irving College, A.B., issued March 10, 1910.

1987. Geo. A. Land, Norristown, Montgomery county, Franklin and Marshall College, A.B., issued March 24, 1910.

1988. William E. Davies, Scranton, Lackawanna county, Marietta (O.) College, A.B., issued April 1, 1910.

1989. John Henry Fike, Philipsburg, Centre county, University of Pennsylvania, B.S., issued April 1, 1910.

1990. Carl L. Millward, Lewisburg, Union county, Bucknell University, Ph.B., issued April 12, 1910.

1991. William C. Hulley, Ralston, Lycoming county, Bucknell University, A.B., issued April 14, 1910.

1992. Lulu B. Smith, State College, Centre county, Syracuse University, Ph.B., issued April 14, 1910.

1993. Olive Schillinger, Ben Avon, Allegheny county, Bucknell University, A.B., issued April 20, 1910.

1994. Edward J. Moore, Shippingport, Beaver county, Geneva College, A.B., issued April 21, 1910.

1995. Frank J. Cook, Kane, McKean county, Grove City College, B.S., issued April 21, 1910.

1996. Flora Atherton, Somerset, Somerset county, Wilson College, A.B., issued April 27, 1910.

1997. Richard R. Dry, Buffalo, N. Y., Lancaster county, Pennsylvania State College, B.S., issued April 27, 1910.

1998. Phoebe Edna Stradling, Paoli, Chester county, Swarthmore College, A.B., issued May 5, 1910.

1999. Jonathan Leo Zerbe, Tyrone, Blair county, University of Pennsylvania, B.S., issued May 5, 1910.

2000. Burr De Forest Vail, Lakewood, N. J., Lackawanna county, Wesleyan University, A.B., issued May 5, 1910.

2001. Jonas Bertram Ely, Nineveh, Greene county, Waynesburg College, B.S., issued May 5, 1910.

2002. Marcellus De Vaughn, Jr., Donora, Washington county, Washington and Jefferson College, A.B., issued May 5, 1910.

2003. Earl Austin Morton, Dravosburg, Allegheny county, Bucknell University, A.B., issued May 5, 1910.

2004. Fred O. Smith, Harrisburg, R. D. 2, Cumberland county, Dickinson College, A.B., issued May 10, 1910.

2005. Mary R. Patterson, Venetia, R. D. 2, Washington county, Muskingum College, B.S., issued May 10, 1910.

2006. A. Kirk Thompson, New Wilmington (Lawrence), Mercer county, Westminster College, A.B., issued May 10, 1910.

2007. Thomas Wood, Muncy (Lycoming), Allegheny county, Bucknell University, A.B., issued May 10, 1910.

2008. Geo. M. Briner, Carlisle, Cumberland county, Dickinson College, Ph.B., issued May 10, 1910.

2009. John A. Campbell, Quarryville, R. D. 4, Lancaster county, Franklin and Marshall College, A.B., issued May 10, 1910.

2010. Harold E. Kuhns, Egypt, Lehigh county, Muhlenberg College, A.B., issued May 11, 1910.

2011. Magdalene Strickler, Lebanon, Lebanon county, Lebanon Valley College, A.B., issued May 11, 1910.

2012. Harold D. Steward, Lansdale, Montgomery county, Ursinus College, A. B., issued May 11, 1910.

2013. Geo. Harold Weiss, Schuylkill Haven, Schuylkill county, Yale College, A.B., issued May 16, 1910.

2014. Laura J. Strode, West Chester, Chester county, Swarthmore College, A.B., issued May 25, 1910.

2015. Eva J. Algire, Shamokin, Northumberland county, Syracuse University, Ph.B., issued May 25, 1910.

2016. R. O. Hughes, West Chester, Chester county, Brown University, A.B., issued May 25, 1910.

2017. Margaret Cosgrove, Braddock, Allegheny county, Vassar College, A.B., issued May 25, 1910.

2018. Fannie M. Hamilton, Braddock, Allegheny county, Vassar College, A.B., issued May 25, 1910.

2019. Adda M. Myers, Natrona, Allegheny county, Maryland College, B.S., issued May 25, 1910.

2020. Bertha E. Speer, Oakdale, Allegheny county, Grove City College, Ph.B., issued May 25, 1910.

2021. Harry Howard Kiebler, Latrobe, Westmoreland county, Grove City College, Ph.B., issued May 25, 1910.

2022. Frances McClaren, New Castle, Lawrence county, Westminster College, A.B., issued May 31, 1910.

2023. Ursula D. Parmley, Mahanoy City, Schuylkill county, Bucknell University, B.S., issued May 31, 1910.

2024. Sara Alice Freed, Boyce, Allegheny county, Westminster College, A. B., issued May 31, 1910.

2025. LeRoy S. Wolff, Johnstown, Cambria county, Lafayette College, A.B., issued May 31, 1910.

2026. Joseph B. Emerson, West Bridgewater, Beaver county, Beaver College, A.B., issued May 31, 1910.

2027. Ethel H. Brewster, Chester, Delaware county, Swarthmore College, A.B., issued June 1, 1910.

2028. Ernest C. Noyes, Pittsburg, Allegheny county, Yale College, A.B., issued June 1, 1910.

2029. Clarence H. Pennell, Uswick, Wayne county, Pennsylvania State College, B.S., issued June 1, 1910.

2030. John James Armstrong, Vandergrift, Westmoreland county, Mt. Union College, Ph.B., issued June 7, 1910.

2031. Mary Isabel Bowen, Ridley Park, Delaware county, Bucknell University, B.S., issued June 7, 1910.

2032. Jno J. Henderson, Creekside, Indiana county, Susquehanna University, A.B., issued June 7, 1910.

2033. Della Grounds, Houston, Washington county, Westminster College, A.B., issued June 7, 1910.

2034. Jessie L. Welsh, Dalton, Lackawanna county, Wilson College, A.B., issued June 7, 1910.

2035. Jean D. Russell, Scranton, Lackawanna county, Wellesley College, A.B., issued June 7, 1910.

2036. Wm. Henry Scranton, Scranton, Lackawanna county, Cornell University, A.B., issued June 7, 1910.

2037. George Beggs, Jr., Reading, Berks county, Lehigh University, issued June 7, 1910.

2038. Alice M. MacCarthy, Reading, Berks county, Smith College, A.B., issued June 7, 1910.

2039. Geo. M. Jones, Reading, Berks county, University of Pennsylvania, Ph.B., issued June 7, 1910.

2040. Harry Curtis Henry, Reading, Berks county, University of Pennsylvania, B.S., issued June 7, 1910.

2041. Albert J. May, Reading, Berks county, Allegheny College, A.B., issued June 7, 1910.

2042. Paul N. Schaeffer, Reading, Berks county, Franklin and Marshall College, A.B., issued June 7, 1910.

2043. Samuel W. Kern, Stony Creek Mills, Berks county, Franklin and Marshall College, A.B., issued June 7, 1910.

2044. Martin W. Smith, Lebanon, Lebanon county, Ursinus College, A.B., issued June 7, 1910.

2045. Louise Black, Grove City, Mercer county, Grove City College, Ph.B., issued June 14, 1910.

2046. Max F. Lehman, Annville, Lebanon county, Lebanon Valley College, A.B., issued June 14, 1910.

2047. Jesse H. Lauffer, Irwin, Westmoreland county, Franklin and Marshall College, A.B., issued June 14, 1910.

2048. Lillian M. Pike, Media, Delaware county, Swarthmore College, A.B., issued June 14, 1910.

2049. Geo. G. Kunkle, Brodheadsville, Monroe county, Muhlenberg College, A.B., issued June 14, 1910.

2050. Edwin C. Gilland, Shamokin, Northumberland county, Lafayette College, A.B., issued June 14, 1910.

2051. Vivian V. Hall, Du Bois, Clearfield county, Oberlin College, A.B., issued June 14, 1910.

2052. Willis W. Lantz, Strasburg, Lancaster county, Franklin and Marshall College, A.B., issued June 14, 1910.

2053. Minnie F. Clutter, Waynesburg, Greene county, Waynesburg College, A.B., June 15, 1910.

2054. Martin L. Wilson, Mauch Chunk, Carbon county, Cornell University, A.B., issued June 15, 1910.

2055. Charles L. Myers, West Grove, Chester county, Dickinson College, Ph.B., issued June 15, 1910.

2056. Stanton R. Smith, West Chester, Chester county, Bucknell University, B.S., issued June 15, 1910.

2057. Viola A. Helm, Steelton, Dauphin county, Dickinson College, Ph.B., issued June 15, 1910.

2058. Norman E. Henry, Williamsport, Lycoming county, Bucknell University, A.B., issued June 15, 1910.

2059. Thomas J. Wagner, Shamokin, Northumberland county, Franklin and Marshall College, A.B., issued June 15, 1910.

2060. Bessie May Dutton, Bellevue, Allegheny county, Allegheny College, A.B., issued June 16, 1910.

2061. Grace A. Jenks, Bellevue, Allegheny county, Allegheny College, A.B., issued June 16, 1910.

2062. Mary E. Peiffer, Lebanon, Lebanon county, Lebanon Valley College, A.B., issued June 16, 1910.

2063. Gordon Evans, Scranton, Lackawanna county, Bucknell University, Ph.B., issued June 16, 1910.

2064. Chas. M. Greminger, Osceola Mills, Clearfield county, Bucknell University, B.S., issued June 25, 1910.

2065. Katharine M. Fretts, Perryopolis, Fayette county, Ohio Wesleyan College, A.B., June 27, 1910.

2066. Helen M. Smith, Carlisle, Cumberland county, Dickinson College, Ph.B., issued June 27, 1910.

2067. Margaret May Yeager, Halifax, Dauphin county, Susquehanna University, B.S., issued June 27, 1910.

2068. Ross H. Dailey, Donora, Washington county, Grove City College, Ph.B., issued June 27, 1910.

2069. Ralph G. White, Grove City, Mercer county, Grove City College, A.B., issued June 28, 1910.

2070. Robert C. Gibson, Leechburg, Armstrong county, Grove City College, A.B., issued June 28, 1910.

2071. Geary E. Everett, Long Pond, Monroe county, Muhlenberg College, A.B., issued June 28, 1910.

2072. George Howarth, Wilkes-Barre, Luzerne county, Lafayette College, Ph.B., issued June 28, 1910.

2073. James O. Knauss, Jr., Coopersburg, Lehigh county, Lehigh University, A.B., issued June 28, 1910.

2074. Alice Bell Phillips, McKees Rocks, Allegheny county, Westminster College, A.B., issued July 13, 1910.

2075. Stanley Q. Fowler, Baden, Beaver county, Beaver College, A.B., issued July 13, 1910.

2076. Alice Knighton Betts, Towanda, Bradford county, Mount Holyoke College, A.B., issued July 13, 1910.

2077. John F. Huffman, Waynesburg, Greene county, Waynesburg College, Ph.B., issued July 13, 1910.

2078. Ralph E. Smith, Bloomsburg, Columbia county, Dickinson College, A.B., issued July 13, 1910.

2079. Harry E. McConnell, West Middlesex, Mercer county, Thiel College, B.S., issued July 13, 1910.

2080. Sarah M. Dinsmore, Waynesburg, Greene county, Waynesburg College, A.B., issued July 14, 1910.

2081. Mabel E. Williams, Pittsburg, Allegheny county, Vassar College, A.B., issued July 14, 1910.

2082. Chester B. Story, Wilkinsburg, Allegheny county, Tufts College, A.B., issued July 14, 1910.

2083. Josephine Brown, Allenwood, Union county, Bucknell University, A.B., issued July 14, 1910.

2084. Margaret A. Houston, Jackson Center, Mercer county, Grove City College, Ph.B., issued July 14, 1910.

2085. Eliza Edna Pomeroy, New Castle, Lawrence county, Westminster College, A.B., issued July 14, 1910.

2086. Eril May Teed, Lloyd, Tioga county, Bucknell University, B.S., issued July 18, 1910.

2087. Oscar P. Ballintine, Millvale, Allegheny county, Grove City College, Ph.B., issued July 19, 1910.

2088. O. I. Albright, Carlisle, R. D. 4, Cumberland county, Albright College, B.S., issued July 21, 1910.

2089. T. A. Brown, New Brighton, Beaver county, Geneva College, A.B., issued July 21, 1910.

2090. Floy Kintner, Scranton, Lackawanna county, Wilson College, A.B., issued July 21, 1910.

2091. Stanley Bright, New Castle, Lawrence county, Allegheny College, A.B., issued July 22, 1910.

2092. Romaine Russell, Hickory, Washington county, Westminster College, Ph.B., issued July 22, 1910.

2093. Clarence D. Coughlin, Wilkes-Barre, Luzerne county, Harvard College, A.B., issued July 22, 1910.

2094. Frank Field, Wind Ridge, Greene county, Waynesburg College, A.B., issued August 9, 1910.

2095. Paul A. Hoffman, Renovo, Clinton county, Thiel College, A.B., issued August 9, 1910.

2096. Fanny B. Cheyney, Media, Delaware county, Swarthmore College, A.B., issued August 9, 1910.

2097. Sarah Barkley McCoy, Argyle, N. Y., Washington county, Westminster College, A.B., issued August 9, 1910.

2098. Benjamin A. Kline, North Wales, Montgomery county, Lafayette College, Ph.B., issued August 9, 1910.

2099. Florence M. Wright, New Wilmington, Lawrence county, Westminster College, Ph.B., issued August 9, 1910.

2100. Irvin A. Timlin, Clarion, Clarion county, Bucknell University, Ph.B., issued August 9, 1910.

2101. John B. Ehrhart, White Haven, Luzerne county, Albright College, B.S., issued August 25, 1910.

2102. Margaret K. Lester, Beaver Falls, Beaver county, Geneva College, B.S., issued August 25, 1910.

2103. P. J. C. Glatzert, Sewickley, Allegheny county, Thiel College, A.B., August 25, 1910.

2104. Frank H. Painter, Muncy, Lycoming county, Bucknell University, Ph.B., issued August 25, 1910.

2105. Orin W. Jaquish, Mansfield, Tioga county, Grove City College, Ph.B., issued August 25, 1910.

2106. Effie C. Snyder, Kearney, (Nebraska), Center county, Pennsylvania State College, B.S., issued August 25, 1910.

2107. Harry K. Bomberger, Lebanon, Lebanon county, Lebanon Valley College, A.B., issued September 6, 1910.

2108. J. F. Mitchell, Grove City (Mercer), Butler county, Grove City College, A.B., issued September 7, 1910.

2109. John W. Land, Hamburg, Berks county, Franklin and Marshall College, A.B., issued September 7, 1910.

2110. Bertha Moore, Oakdale, Allegheny county, Grove City College, A.B., issued September 7, 1910.

2111. S. Warren Lyons, Monessen, Westmoreland county, Grove City College, Ph.B., issued September 7, 1910.

2112. Samuel Harvey Miller, New Castle, Lawrence county, Thiel College, A.B., issued September 7, 1910.

2113. Amy A. Seidel, Transfer, Mercer county, Westminster College, A.B., issued September 13, 1910.

2114. Franklin E. Sturgeon, New Castle, Lawrence county, Westminster College, A.B., issued September 13, 1910.

2115. Clarence J. Carver, Norristown, Montgomery county, Dickinson College, A.B., issued September 13, 1910.

2116. Bruce U. P. Cobaugh, Connellsville, Fayette county, Pennsylvania College, B.S., issued September 13, 1910.

2117. Amos Corpman Henry, Penbrook, Dauphin county, Franklin and Marshall College, A.B., issued September 13, 1910.

2118. Lloyd E. Pollock, Waynesburg, Greene county, Waynesburg College, B.S., issued September 13, 1910.

2119. Eliza Jane Pugh, Allegheny, Allegheny college, West Virginia University, A , issued September 19, 1910.

2120. Gertrude A. Myers, Williamsport, Lycoming county, Bucknell University, B.S., issued September 28, 1910.

2121. Clyde W. Cranmer, Williamsport, Lycoming county, Bucknell University, Ph.B., issued October 3, 1910.

2122. Louis F. Lutton, Munhall, Allegheny county, Indiana University, A.B., issued October 12, 1910.

2123. Tobias C. Harr, Wyomissing, Berks county, University of Pennsylvania, A.B., issued October 12, 1910.

2124. Helen Longsdorf, Carlisle, Cumberland county, Irving College, B.S., issued October 12, 1910.

2125. Hayes C. Taylor, Doe Run, Chester county. Cornell University, B.S., issued October 12, 1910.

2126. George W. Pedlow, Chester, Delaware county, Dickinson College, Ph.B., issued October 12, 1910.

2127. Hiester A. Bowers, Reading, Berks county, Franklin and Marshall College, A.B., issued November 12, 1910.

2128. Linden H. Rice, McConnellsburg, Fulton county, Ursinus College, A.B., issued November 12, 1910.

2129. Helen J. Gay, Bradford, McKean county, Mount Holyoke College, A.B., issued November 12, 1910.

2130. Rilla Belle Tait, Bradford, McKean county, Wellesley College, A.B., issued November 12, 1910.

2131. Mary W. Mosser, Myerstown, Lebanon county, Dickinson College, Ph.B., issued December 7, 1910.

2132. Ethel N. Straw, Bellevue, Allegheny county, Maryland College, B.S., issued December 13, 1910.

2133. Emanuel E. Snyder, Stewartstown, York county, Lebanon Valley College, A.B., issued December 13, 1910.

2134. Chas. D. Cooper, Millersville, Lancaster county, Bucknell University, Ph.B., issued December 14, 1910.

2135. Thomas M. Hickey, St. Marys, Elk county, University of Vermont, B.S., issued December 14, 1910.

ITEMS FROM REPORTS.

CLINTON.—Supt. McCloskey: At the annual meeting of Clinton Sounty Directors' Association, 160 directors were present. Several districts had their full boards present. Two addresses were delivered by Deputy Supt. Teitrick, and Howard I. Painter, Esq., of Butler. They gave good advice on school administration. Two local institutes were held during the month, one at Mackeyville and another at Beech Creek. Both were well attended by teachers and patrons.

CUMBERLAND.—Supt. Green: Nine educational meetings were held in different sections of the County. The directors' association met at Shippensburg, with the largest attendance on record, 114 present. Supt. Eli Rapp delivered three excellent addresses, and the discussions were interesting and helpful. Through the kindness and hospitality of Dr. S. A. Martin, principal of the Normal School, the directors took dinner at the school. This was a pleasant feature of the meeting.

ERIE.—Supt. Russell: State High School Inspector Hertzog in company with the County Superintendent visited ten high schools in Erie County. He expressed himself as well pleased with the work doing in each school, barring the laboratory equipment which is generally meager. He strongly recommended a new township high school building at West Springfield, and showed that with enlarged facilities this excellent school could easily be made first grade. It is hoped that action may be taken in the matter before the opening of another school year.

FOREST.—Supt. Morrison: Interesting local institutes have been held at Tionesta and Marienville. The discussions were spirited. Two Farmers' Institutes were held in the county with educational sessions. About 450 persons were present. At Tionesta, Mr. Robert P. Bliss presented the State Library plan to the teachers.

FRANKLIN.—Supt. Smith: Local teachers' institutes were held at seven places during the month; in these meetings twelve townships were represented. The meetings were well attended and interesting. The New Course of Study was one of the topics generally discussed. At the Directors' Association the attendance was the largest in its history. Supt. Coughlin, of Wilkes-Barre, and Supt. McGinnis, of Steelton, were the leading speakers. We have introduced the Elementary Course of Study prepared by the Department into all the schools of the county and find it meeting with general favor among the teachers.

FULTON.—Supt. Lamberson: The directors' convention was the best we have ever had. Forty-four directors were present. Dr. Chas. H. Gardinier, of Shippensburg, gave three very instructive and practical addresses. The directors took an active part in the discussions. The general public manifested more interest than ever before.

HUNTINGDON.—Supt. Dell: The directors' convention was our leading event of recent date. Dr. Samuel Hamilton, of Braddock, was the lecturer. He did excellent work, and our directors and citizens are loud in their praise of it. Nine successful local institutes have been held. Packed houses and enthusiastic audiences greeted us. Several literary and debating societies are doing good work. Old style spelling schools are in favor just now. One day of our annual institute was given to Scientific Temperance—a very live subject with most of us. An educational rally was held at Mapleton. Prof. Beck is making things go there. A meeting was also held in Dublin.

LACKAWANNA.—Supt. Taylor: At the annual meeting of the Directors' Association one hundred and sixty-six directors were present. Clifton, Covington, Dickson, Madison, West Abington, and Olyphant were represented by the whole number of directors. Benton, Blakely, Carbondale Tp., Elmhurst, Fell, Greenfield, Jermyn, Moscow, Newton, Ransom, Spring Brook, Vandling, Archbald, and Taylor were represented by a majority of each board. Every district in the county except Waverly and Gouldsboro was represented.

LEBANON.—Supt. Snoke: Very successful local institutes were held at Annville, Richland and Hebron. Our attendance in the schools, which have all been visited once and some twice, is in many instances nearly perfect; in other respects also the schools are in a good condition.

LUZERNE.—Supt. Hopper: The annual meeting of the directors' association was attended by 250 directors, representing nearly all of the 72 districts. The speakers were Deputy Supt. Teitrick, Dr. Sam'l Hamilton, Wm. J. Trembath, Esq., and Mr. Thos. J. Brennan. The directors were greatly interested and no doubt much benefited.

MIFFLIN.—Supt. Wills: The directors' association met in annual session with the best attendance in its history—60 of the 84 directors in the county were present. Deputy Supt. Teitrick made two addresses. Spelling contests

are a feature of educational activity throughout the county.

NORTHAMPTON.—Supt. Grim: The new seven-room building at Hellertown was dedicated with appropriate ceremonies.

NORTHUMBERLAND.—Supt. Fetzer: Local institutes were held at Riverside, Pottsgrove, Dalmatia and Snydertown. Supts. Ellenberger and Wilson assisted in the work. Most of the local institutes have become self-supporting so far as the work is concerned. The teachers do most of it. Papers are prepared and the subjects are discussed. Each year brings an increased attendance in our director's association. This year 146 were present. Deputy Supt. Teitrick and Supt. Ellenberger were the speakers. The day was not long enough for us to get through with the programme. The directors manifested such a lively interest in the discussions that part of the work had to be hurried. The highest praise is due our directors for their loyal support in the school work.

PERRY.—Supt. Kline: Local institutes have been held in various sections of the county. All of them were well attended, especially the one at Marysville, where 33 out of 37 teachers of the joint district were present. An excellent programme was rendered.

PIKE.—Supt. Westbrook: Local institutes were held at Paupac and Dingman's Ferry. Prof. J. M. Coughlin was with us at Paupac and delivered two very inspiring addresses. The schools of the county in general, and those of Milford in particular, lost one of their most ardent supporters in the death of C. W. Bull, Esq., in the 66th year of his age. Previous to his admission to the bar in 1867, he taught two terms of school at Milford.

SNYDER.—Supt. Stetler: Eighty-six directors were present at the annual meeting of the directors' association. Dr. George Gerwig, of Pittsburg, delivered several practical addresses. In all the districts I have visited on my second tour of the county I was accompanied by some of the directors, in a majority of instances by the entire board. The cause of education in this county has suffered a heavy loss in the death of H. R. Fetterolf, president of the school board of Adams township.

WASHINGTON.—Supt. Crumrine: This year's annual institute—the sixtieth—was perhaps our best. Never did instructors do better, nor teachers show greater interest. The directors' convention was attended by over 200 members. A fine new school building was dedicated at Monongahela City.

WAYNE.—Supt. Koehler: By special action of the school board of Buckingham the term of the township high school was lengthened from seven to eight months. Now all our high schools have a term of either eight or nine months.

ALTOONA.—Supt. Baish: Our high school students are given free admission to the lecture course of the University Extension Society, composed principally of our teachers. The course this year consists of three by Dr. Toyokichi Iyenaya on The Orient and the Occident, Awakening of China, and Japan and the United States; and three by Prof. J. C. Powys, on Disraeli and Gladstone, John Morley and Joseph Chamberlain, and G. K. Chesterton and Bernard Shaw.

BANGOR.—Supt. Gruver: The patriotic orders of our borough presented the schools with a large and beautiful flag. The school board erected a 75-foot pole. Washington's birthday was accordingly celebrated with appropriate exercises. The school children assembled on the lawn and sang the Star Spangled Banner while the flag was being raised, after which the members of the orders and many others proceeded to the auditorium of the high school where the exercises were held.

BRADFORD.—Supt. Schermerhorn: At the invitation of Supt. Slawson, of Olean, New York, our teachers attended an educational meeting held in that city. Among the speakers was Dr. Frank McMurray, of Teachers' College, New York, whose address was one of the best we have ever heard. As we have been using Dr. McMurray's book "How to Study" for professional reading this term, his address was of especial interest to us.

DANVILLE.—Supt. Dieffenbacher: Lincoln's and Washington's birthdays were fittingly celebrated on the same day. The occasion was also known as "Parents' Day," with an exhibition of the pupils' work. About 300 visitors were present. In the high school two excellent addresses were delivered—one by Rev. McKinney, on "Washington," the other by Rev. Musselman, on "Lincoln," which, with the fine music we had, made the occasion enjoyable and profitable.

DUNMORE.—Supt. Hoban: February 22nd, the Number Three building a fine new school, modern in every respect, was opened for the first time. There was also opened a four-room addition to our Number Ten school.

JEANNETTE.—Supt. Shank: Systematic medical inspection has been established in our schools. The local physicians and dentists offer their services gratuitously and we expect good results.

LANSFORD.—Supt. Kuntz: We recently started the Batavia system in several of our rooms. In one room of forty-five pupils we are trying out the two-teacher idea; and in several others, containing about thirty pupils each, the one-teacher plan of individual instruction is being carried out.

LOCK HAVEN.—Supt. Ling: The board of education has authorized a fifteen minute outdoor recess for all pupils below the 8th grade in each half-day session A couple of good atlases were added to the library equipment by the board of education. A civic club recently organized in the city among the women bids fair to become an educational force of value. The librarian of the new Annie H. Ross public library will give, during the coming month, a series of stories on the History of the West Branch Valley at the Saturday morning story hour. This hour is very popular among school children.

NANTICOKE.—Supt. Diffendafer: We held a very profitable institute Friday afternoon and Saturday. Prof. J. A. Puffer gave us his lecture on Boy Leadership, and addressed the teachers on "Delinquency and Degeneracy" and "Wild Instincts of the Boy Nature that Need Guiding.' Prof. Samuel E. Weber, of State College, delivered two helpful addresses upon "Caring for the Individual" and "Organizing Experiences."

PUNXSUTAWNEY.—Supt. Jackson: We completed arrangements with DuBois and Brookville whereby Dr. Arthur Holmes of the Psychological Clinic of the University of Pennsylvania visited each of the towns of DuBois, Brookville, and Punxsutawney. Dr. Holmes examined retarded children in each place and lectured in the evening on Retardation. Much public interest was manifested here at Punxsutawney, at least half the physicians in town attended the examinations and lecture. Many operations for adenoids and hypertrophied tonsils have been performed as a result of the visit and added impetus given the movement for adequate medical inspection in the schools. The second annual Christmas offering of the public school children to the poor was made Dec. 16th. The children bring vegetables, canned fruit, tea, coffee, sugar, or a small amount of anything they choose which will be useful in making up Christmas baskets for the poor. The aggregate results are large. This year we had 25 bushels of potatoes, 87 quarts of homemade preserves and pickles, 167 quarts of canned vegetables, and other things in proportion. The Salvation Army acts as distributing agent. The children take great delight in this offering and the lesson of thoughtfulness for others is of great value. Children who remember those in need at the Christmas season will as adults be thoughtful of those who are unfortunate.

WEST CHESTER.—Supt. Jones: The pupils in the eighth grade are allowed to spend the last half-hour of one school day during the week in the library. All attend with their teachers, one room at a time. The librarian reads to them, talks to them on the use of the card catalogue and book indexes, and shows them how to find the books and the subjects they need in their work. The object is two-fold: to prepare the pupils for their reference work in the high school and familiarize them with the methods of a reference library, and to acquaint them with books and habituate them to read such books as are helpful. The library is used daily by a large proportion of the high school students. The employment by the school board of a trained librarian with the spirit of the true teacher, has been one of the most progressive steps in school affairs.

PERMANENT CERTIFICATES GRANTED.

Continued from April Number, 1910.

No.	Name.	P. O. Address.	County.	Date, 1910.
4681	Anna Snyder	Altoona	Blair	Jan. 4
4682	Lillie B. Geiser	"	"	" 4
4683	Anna D. Boyle	Simpson	Lack'anna	" 4
4684	Stella Hollenbeck	Moosic	"	" 4
4685	Edna Malone	Moscow	"	" 4
4686	Augusta R. Miller	"	"	" 4
4687	Leila J. Parker	Waverly	"	" 4
4688	Edith A. Stone	"	"	" 4
4689	Martha Stirn	Archbald	"	" 4
4690	Nettie Weir	Moosic	"	" 4
4691	E. G. Cochener	Tidioute	Warren	Apr. 12
4692	Elisabeth Garner	Clarendon	"	" 12
4693	Esther H. Smith	Bermudian	Cumb'and	" 22
4694	Bessie M. Bear	Mechanicsburg	"	" 22
4695	Mary M. Snyder	West Fairview	"	" 22
4696	Helen C. Markell	" "	"	" 22
4697	Bertha E. Aberle	Carlisle	Cumb'and	Apr. 22
4698	Alice B. Butcher	"	"	" 22
4699	C. Gordon Leigh	Newville	"	" 22
4700	S. H. Orris	" No. 3	"	" 22
4701	S. F. Bowman	Peru	Juniata	" 22
4702	Nora E. Cox	Thompsont'n	"	" 22
4703	Mabel Esh	Spruce Hill	"	" 22
4704	Isabel P. Graham	Spruce Hill	"	" 22
4705	L. W. Portzline	Thompsont'n	"	" 22
4706	D. B. Rumbaugh	Mexico	"	" 22
4707	A. B. Shover	Mifflin	"	" 22
4708	H. Ray Shreffler	Thompsont'n	"	" 22
4709	Bessie D. Weaver	Mexico	"	" 22
4710	Cloyd E. Zeiders	Knousetown	"	" 22
4711	Violet B. Eggeling	SpringCity,R.1	Chester	" 23
4712	Wm. L. Kirk	Oxford	"	" 23
4713	Tracy B. Leeke	" R. 3	"	" 23
4714	Anna Manger	Elverson	"	" 23
4715	Mary M. Manger	Parkerford	"	" 23
4716	Etta Neel	Cochranville	"	" 23
4717	Mary P. O'Brien	Avondale	"	" 23
4718	G. E. Ardery	Mar'a Furnace	Centre	" 27
4719	Herbert E. Stover	Livonia	"	" 27
4720	Lloyd W. Stover	Aaronsburg	"	" 27
4721	M. T. Zubler	Spring Mills	"	" 27
4722	Elmer E. Sipe	McClure, R. 1	Mifflin	" 27
4723	H. M. Bubb	Lewist'n R. 3	"	" 27
4724	Chloe E. Schutt	Lewistown	"	" 27
4725	Laura E. McKee	Ulster	Bradford	May 10
4726	Lizzie O'Hearn	Towanda R. 2	"	" 10
4727	C. Virginia Weber	Du Bois	Clearfield	" 10
4728	Emily M. Blumer	Allentown	Lehigh	" 10
4729	Sadie C. Bornman	"	"	" 10
4730	Stella H. Leaser	"	"	" 10
4731	Flora J. Lenhart	"	"	" 10
4732	M. L. K. Ritter	"	"	" 10
4733	C. J. Seaton	"	"	" 10
4734	Mamie M. Smith	"	"	" 10
4735	Dora M. Stuber	"	"	" 10
4736	Caroline D. Fisher	Lebanon	Lebanon	" 11
4737	William V. Coyle	Treschow	Carbon	" 12
4738	Grace Flood	Beaver Mead	"	" 12
4739	Chas. H. George	Palmerton	"	" 12
4740	Robert Getz	Albrightsville	"	" 12
4741	Wallace O. Gerhard	Weatherly	"	" 12
4742	Helen I. Koch	Parryville	"	" 12
4743	Mary McCabe	Nesquehoning	"	" 12
4744	Mary C. Quinn	Beaver Mead	"	" 12
4745	Arthur E. Buck	Unityville	Lycoming	" 16
4746	Edith Beck	Buttonwood	"	" 16
4747	A. C. Boudeman	Unityville	"	" 16
4748	R. M. Blackwell	Montoursv'le	"	" 16
4749	Irvin F. Calvert	Bodines	"	" 16
4750	Perry A. Caris	Tylersville,	"	" 16
4751	Eliza Carson	Waterville	"	" 16
4752	Jesse D. Derick	Unityville	"	" 16
4753	J. E. Halderman	Cogan House	"	" 16
4754	Sue M. Heirly	M'nt'my R. 2	"	" 16
4755	Fred W. Marshall	Roar'g Br'nch	"	" 16
4756	Helen C. Martin	Jersey Shore	"	" 16
4757	O. F. Reuther	Muncy	"	" 16
4758	E. Lloyd Rogers	Nittany	"	" 16
4759	A. G. Reed	Liberty	"	" 16
4760	Eleanor Shaffer	Du Boistown	"	" 16
4761	Robert F. Smith	Liberty	"	" 16
4762	Jennie M. Snyder	Muncy	"	" 16
4763	Alverna Wheeland	Liberty R. 1	"	" 16
4764	Laura Yonken	Montoursville	"	" 16
4765	Laura K. Cassel	Lansdale R. 2	M'tgomery	" 17
4766	Mary M. Clarke	Norristown	"	" 17
4767	C. A. Y. Davidh'ser	New Hanover	"	" 17
4768	L. Y. Davidheiser	New Hanover	"	" 17
4769	E. H. Heacock	Creamerk	"	" 17
4770	Mabel S. Herbein	East Gr'nville	"	" 17
4771	A. E. Hoffman	Pennsburg	"	" 17
4772	Henry M. Johnson	Creamery	"	" 17
4773	B. C. Jorden	Philadelphia	"	" 17
4774	H. M. Kalbach	Norristown	"	" 17
4775	Lydia Kulp	Norristown	"	" 17
4776	Mary B. McCurdy	Port Kennedy	"	" 17
4777	Mary McLean	Norristown	"	" 17
4778	Natalie R. Rogers	Nor'st'n R. 3	"	" 17
4779	Irene H. Sacks	Zieglerville	"	" 17
4780	Helen E. Stiles	Norristown	"	" 17
4781	Elsie S. Renninger	Perkiomenville	"	" 17
4782	Mazie D. Truckses	Norristown	"	" 17
4783	Lloyd F. Wagner	New Hanover	"	" 17
4784	Carrie M. Hepler	East Brady	Armstrong	" 23
4785	Frances E. Colwell	Craigsville	"	" 23
4786	M. E. Weaver	W'th'gton R. 2	"	" 23
4787	Laura Altenderfer	Hamburg	Berks	" 23
4788	Elmer D. Baver	Temple	"	" 23
4789	Florence E. Beard	Birdsboro	"	" 23

No.	Name.	P. O. Address.	County.	Date, 1910.
4790	Wm. N. Conrad	Oley	Berks	May 23
4791	Charles C. Clemens	Bethel	"	" 23
4792	Kathryn K. Endk	Oley	"	" 23
4793	Bertha M. Kintzer	Robesonia	"	" 23
4794	Ethel M. Kline	Birdsboro	"	" 23
4795	Sam. T. Leinbach	Temple	"	" 23
4796	Laura E. Levan	Esterly	"	" 23
4797	Edith Lloyd	Birdsboro	"	" 23
4798	Mary B. Ferguson	Rogersville	Greene	" 23
4799	Goldie Stewart	Carmichaels	"	" 23
4800	Flossie Harden	Waynesburg	"	" 23
4801	J. H. Cunningham	Ceylon	"	" 23
4802	Cora M. Crooks	B'ver Falls R.4	Beaver	" 24
4803	Emily A. Dunmire	Yatesboro	"	" 24
4804	Belle Crawford	New Brighton	"	" 24
4805	H. D. Oliphant	Beaver	"	" 24
4806	Jessie D. Gallaher	Zelienople	"	" 24
4807	E. D. Davidson	Ethel Landing	"	" 24
4808	Nannie I. Torrence	Hookstown	"	" 24
4809	Agnes W. McCance	Beaver	"	" 24
4810	Calvin L. Springer	Colona	"	" 24
4811	Margaret L. White	Beaver Falls	"	" 24
4812	Ira L. Bressler	Hegins	Schuylkill	" 24
4813	Myrtle M. Evans	Donaldson	"	" 24
4814	Frances Fleming	Tremont	"	" 24
4815	Dehlia J. Heaney	Donaldson	"	" 24
4816	Mary Jennings	Shenandoah	"	" 24
4817	Annie C. Jenkins	Pottsville	"	" 24
4818	Loretta Joyce	Mahanoy City	"	" 24
4819	M. Theresa Lewis	Mahanoy City	"	" 24
4820	Peter J. Lawler	Mahanoy City	"	" 24
4821	K.E.Messerschmidt	Barnesville	"	" 24
4822	Sadie E. Matz	Mahanoy City	"	" 24
4823	Mamie T. Meade	Mahanoy Pl'n	"	" 24
4824	Bessie A. Moore	Joliett	"	" 24
4825	E. V. Muldoun	Minersville	"	" 24
4826	Rosalia Myer	Mahanoy City	"	" 24
4827	Elizabeth O'Neill	Ashland	"	" 24
4828	Caroline G. Pugh	Pottsville	"	" 24
4829	Ethel P. Pugh	"	"	" 24
4830	Ethel M. Powell	Mahanoy City	"	" 24
4831	F. M. Shoener	Orwigsburg	"	" 24
4832	Agnes V. Tolan	New Boston	"	" 24
4833	E. Jennie Waters	Pottsville	"	" 24
4834	Ida Buzard	Strattonville	Clarion	" 25
4835	Rose Kerr	Kingsville	"	" 25
4836	Myrtie Heasley	Knox	"	" 25
4837	Grace McIlhattan	Knox	"	" 25
4838	Mary E. Allan	New Kensing'n	Westmo'd	" 26
4839	W. S. Beistel	Stahlstown	"	" 26
4840	F. M. Billhimer	Ruffsdale	"	" 26
4841	Burdella Boyd	Irwin	"	" 26
4842	Pearle G. Boyd	West Newton	"	" 26
4843	Harriet Byerly	Tarr	"	" 26
4844	Effie M. Carroll	Irwin	"	" 26
4845	Sophie M. Cobes	Blairv'lle R. 3	"	" 26
4846	Bess B. Cooper	M't Pleasant	"	" 26
4847	Josephine Deniker	Ruffsdale	"	" 26
4848	John H. Elliott	Lycippus	"	" 26
4849	Dora Fennell	Greensburg R4	"	" 26
4850	A. L. Fitzgerald	Mt. Pleasant	"	" 26
4851	Nellie Fry	" R. 2	"	" 26
4852	Daisy M. Fultz	Mammoth	"	" 26
4853	Ida M. Hofmann	Irwin	"	" 26
4854	Bertha Hull	New Florence	"	" 26
4855	Eva M. King	Jeannette	"	" 26
4856	Harry M. Lakin	Mt. Pleasant	"	" 26
4857	N. Grace Mack	Derry	"	" 26
4858	Jennie E. Markel	Jeannette	"	" 26
4859	Mary Mollison	Scottdale	"	" 26
4860	Jean McFeaters	Vandergrift	"	" 26
4861	James D. Pierce	E. McKeesp't	"	" 26
4862	Jennie Richie	Sutersville	"	" 26
4863	Cloyd P. Robb	New Fl'rnceR4	"	" 26
4864	Laura Shaffer	Latrobe	"	" 26
4865	Eliza'th Sherrick	Scottdale	"	" 26
4866	Viola Sherrick	Alverton	"	" 26
4867	Janie Sterner	West Newton	"	" 26
4868	Hulda E. Swenson	Irwin	"	" 26
4869	Mary Wentsler	Scottdale	"	" 26
4870	Laura V. Wylie	Apollo	"	" 26
4871	Alma G. Cressman	Richl'd Centre	Bucks	" 31
4872	A. L. Frankenfield	Sundale	"	" 31
4873	E. M. Godshall	Richl'd Centre	"	" 31
4874	Paul S. Gulich	Perkasie	"	" 31
4875	Leidy S. Kramer	Perkasie	"	" 31
4876	Anna C. Markey	Philadelphia	"	" 31
4877	Frances L. Boland	Scranton	Lack'anna	June 8
4878	Kathryn Burns	"	"	" 8
4879	Rosa B. Call	"	"	" 8
4880	Loretta Clifford	"	"	" 8
4881	Catherine Costello	"	"	" 8
4882	Anna Coyne	"	"	" 8
4883	Mary Cullen	Scranton	Lack'anna	June 8
4884	Edith Wynn Davie	"	"	" 8
4885	Mary M. Evans	"	"	" 8
4886	Sadie A. Fadden	"	"	" 8
4887	Mary M. Haggarty	"	"	" 8
4888	M. C. Hoffman	"	"	" 8
4889	Gertrude C. Howell	"	"	" 8
4890	Metta Kresky	"	"	" 8
4891	Alice L. Reill	"	"	" 8
4892	M. Richardson	"	"	" 8
4893	Lillian M. Tookey	"	"	" 8
4894	Sadie E. Bates	Braddock	Allegheny	" 9
4895	Elizabeth Boal	West View	"	" 9
4896	Nellie M. Brennan	Homestead	"	" 9
4897	Ella Carroll	West View	"	" 9
4898	Alice E. Carr	Homestead	"	" 9
4899	Agnes G. Craig	Braddock	"	" 9
4900	Mrs. Jennie Ireland	Aspinwall	"	" 9
4901	Pansy E. Jones	Homestead	"	" 9
4902	P. M. Latimer	Carnegie	"	" 9
4903	Anna McKenna	Carnegie	"	" 9
4904	Pauline M. Mohn	Pittsburg	"	" 9
4905	Ida T. Seibel	Homestead	"	" 9
4906	Anna Sullivan	Glassport	"	" 9
4907	E. C. Torrence	Milvale Sta.	"	" 9
4908	A. B. Williams	Mt. Oliver	"	" 9
4909	Sallie A. Beckley	Lebanon R. 9	Lebanon	" 9
4910	Edna Felty	Onset	"	" 9
4911	Katherine Heilman	Lebanon	"	" 9
4912	Grace E. Light	Avon	"	" 9
4913	Katie M. Light	Annville R. 2	"	" 9
4914	Leah Loose	Myerstown	"	" 9
4915	A. A. Maulfair	Lebanon	"	" 9
4916	Mabelle Mease	Onset	"	" 9
4917	Carrie E. Nye	Annville	"	" 9
4918	Allen E. Reist	Lebanon	"	" 9
4919	Elizabeth Clauser	Annville	"	" 9
4920	Stella Conway	N. Wilmington	Lawrence	" 24
4921	Charles F. Ball	Wampum	"	" 13
4922	Garrett H. Blake	Volant	"	" 13
4923	Jessie M. Clark	New Castle	"	" 13
4924	Wm. J. Crawford	Wampum	"	" 13
4925	G. C. Denniston	Volant	"	" 13
4926	Anna M. Dodds	New Castle	"	" 13
4927	S. A. Gilfillan	Skidmore	"	" 13
4928	A. M. Leonhart	New Castle	"	" 13
4929	Hazel M. Lutton	New Castle	"	" 13
4930	Frances M. Miller	New Castle	"	" 13
4931	Mildred M. Miller	Eulaski R. 1	"	" 13
4932	Maude McCurdy	Edenburg	"	" 13
4933	Lulu McIlvenny	New Castle	"	" 13
4934	Helen A. Maxwell	New Castle	"	" 13
4935	M. O. McMillen	New Castle	"	" 13
4936	Clifford Patterson	Grove City R.3	"	" 13
4937	Clara Wilkinson	New Castle	"	" 13
4938	Carl J. Cubbison	Ellwood City	"	" 13
4939	Cula E. Altemus	Saylorsburg	Monroe	July 6
4940	Nellie E. Carlton	La Anna (Pike)	"	" 6
4941	Franklin Everett	Effort	"	" 6
4942	James E. Gregory	Gilbert	"	" 6
4943	Geo. C. Heller	Cresco R. 1	"	" 6
4944	J. B. Hamblin	Swiftsvale	"	" 6
4945	Edward N. Post	Henryville	"	" 6
4946	Minnie F. Serfass	Brodheadsville	"	" 6
4947	Lottie G. Smith	Broaheadsville	"	" 6
4948	Florence E. Storm	Brodheadsville	"	" 6
4949	Ross Transue	Analomink	"	" 6
4950	D. N. Gearhart	Gilbert	"	" 6
4951	Bert M. Le Suer	Reading	Berks	" 7
4952	Mary S. Gartmann	"	"	" 7
4953	A. M. Kenderdine	"	"	" 7
4954	E. H. Keeler	"	"	" 7
4955	Helena M. Kopp	"	"	" 7
4956	Levi W. Mengel	"	"	" 7
4957	Lotte Ph. Gehrke	"	"	" 7
4958	Lucie Ann Moyer	"	"	" 7
4959	M. A. R. Eschbach	Pottstown	M'tgomery	" 7
4960	Ida Faust	"	"	" 7
4961	Lola B. March	"	"	" 7
4962	H. B. Ammerman	Shamokin	Northumb.	" 7
4963	Mary H. Applegate	"	"	" 7
4964	Agnes S. Boyd	"	"	" 7
4965	Myrtle Buck	"	"	" 7
4966	Agnes Childs	"	"	" 7
4967	Gertrude Deibler	"	"	" 7
4968	Minnie Dress	"	"	" 7
4969	Sadie Dunkelberger	"	"	" 7
4970	Martha Gammill	"	"	" 7
4971	Mana Geywitz	"	"	" 7
4972	F. May Haas	"	"	" 7
4973	M. J. Hancock	"	"	" 7
4974	B. P. Harrison	"	"	" 7
4975	Cora Kerschner	"	"	" 7

No.	Name.	P. O. Address.	County.	Date, 1910.
4976	Grace Kuebler	Shamokin	Northumb.	July 7
4977	Isabelle Lawrence	"	"	" 7
4978	J. E. McKay	"	"	" 7
4979	C. R. McWilliams	"	"	" 7
4980	Martha J. Opie	"	"	" 7
4981	N. M. Samuel	"	"	" 7
4982	Annie Schaffner	"	"	" 7
4983	A. M. Schminkey	"	"	" 7
4984	Lauretta Scholl	"	"	" 7
4985	Edith S. Startzel	"	"	" 7
4986	Carrie Stern	"	"	" 7
4987	Elizabeth White	"	"	" 7
4988	Minnie A. Yoder	"	"	" 7
4989	J. Fred. Lehman	Summerville	Jefferson	" 8
4990	B. E. Matson	Sigel	"	" 8
4991	Nellie Ryan	Punxsutawney	"	" 8
4992	Mary Cave	Sharon	Mercer	" 8
4993	Harriet Lyman	Sharon	"	" 8
4994	Sallie Henry	Everett	Bedford	" 8
4995	John M. Karns	Everett R. 4	"	" 8
4996	Flossie B. Pennell	Clearville R. 1	"	" 8
4997	A. W. Sparks	Everett	"	" 8
4998	Amy Anderson	Oil City	Venango	" 8
4999	Maude Anderson	Pleasantville	"	" 8
5000	Elizabeth Carner	Harrisville	"	" 8
5001	Ethel Griffin	Emlenton	"	" 8
5002	Analena Hodgson	Franklin	"	" 8
5003	Minnie E. Ray	Kennerdell R. 1	"	" 8
5004	Jennie Raymond	Polk	"	" 8
5005	Ethel Taylor	Franklin R. 6	"	" 8
5006	Nellie E. Wright	Titusville	"	" 8
5007	Geo. A. Paige	Port Trevort'n	Snyder	" 8
5008	Minerva Snyder	Mt. Pl's'nt M'ls	"	" 8
5009	Chas. A. Fisher	Selins Grove	"	" 8
5010	Laura D. Mann	Danville	Montour	" 8
5011	Verna M. Reed	Danville	"	" 8
5012	H. E. Cotner	Washing'ville	"	" 8
5013	G. R. Houghton	Exchange	"	" 8
5014	W. W. Wilson	Danville	"	" 8
5015	Ada R. Raup	Danville R. 1	"	" 8
5016	J. Ralph Irwin	Schuyler	"	" 8
5017	Amanda Melander	Glenhazel	Elk	" 8
5018	Claire Edmunds	Mifflinburg	Union	" 8
5019	Anna C. Sanders	Vicksburg	"	" 8
5020	D. Forrest Dunkle	Lewisburg	"	" 8
5021	Philip H. Myers	Dushore	Sullivan	" 9
5022	Linda Houseweart	Lopez	"	" 9
5023	Flora Cooke	Nordmont	"	" 9
5024	William Gilmore	Dushore	"	" 9
5025	Tillie L. Booser	Derry Church	Dauphin	" 9
5026	Elmer E. Snyder	Palmyra R. 1	"	" 9
5027	Mary B. Forbes	Chamb'sburg	Franklin	" 9
5028	Idell Kahl	Smithburg, M.	"	" 9
5029	Nelle Garns	Mercersburg	"	" 9
5030	Ruth Garns	Merc'burg, R. 1	"	" 9
5031	Bertha M. Smith	Ch'sburg R. D.	"	" 9
5032	Mabel A. Umbrell	Lurgan	"	" 9
5033	Nora Gilland	Greencastle	"	" 9
5034	Charles R. Fisher	Warren, O.	"	" 9
5035	J. Frank Faust	Mowersville	"	" 9
5036	Aaron Myers	Greencastle	"	" 9
5037	Frank P. Blair	Mercersburg	"	" 9
5038	H. M. Benedict	Mt. Alto R. 1	"	" 9
5039	L. R. Zullenger	U. Strasburg	"	" 9
5040	Stewart L. Hoch	U. Strasburg	"	" 9
5041	D. E. Michael	Lurgan	"	" 9
5042	Paul R. West	U. Strasburg	"	" 9
5043	E. S. Anders	Easton	Northa'ton	" 11
5044	Naomi S. Betz	Wind Gap	"	" 11
5045	Lillie M. Coyle	Easton	"	" 11
5046	M. E. Cameron	Easton	"	" 11
5047	F. E. Chegwidden	Easton	"	" 11
5048	Eliza J. Chatten	Bethlehem	"	" 11
5049	Anna M. Drew	Easton	"	" 11
5050	George Handelong	Bangor R. 1	"	" 11
5051	H. J. Harris	Hellertown	"	" 11
5052	Arthur K. Harris	So. Bethlehem	"	" 11
5053	A. F. Ketchledge	Easton	"	" 11
5054	M. Y. Kachline	Martin's Creek	"	" 11
5055	R. B. McIlhaney	Bath	"	" 11
5056	Rachel Meyer	Easton	"	" 11
5057	M. E. Nothhelfer	Easton	"	" 11
5058	Helen Odenwelder	Nazareth	"	" 11
5059	J. Pearl Prout	Easton	"	" 11
5060	Agnes M. Phelen	Easton	"	" 11
5061	Chas. H. Royer	Easton	"	" 11
5062	Chas. F. Stecker	Easton R. D. 4	"	" 11
5063	Mary E. Sheeran	Easton	"	" 11
5064	Ella M. Scholl	Bethlehem	"	" 11
5065	E. Stichter	Nazareth	"	" 11
5066	Helen Santee	Nazareth	"	" 11
5067	Robert F. Silfies	Bath	"	" 11
5068	F. J. Wilt	So. Bethlehem	"	" 11
5069	Iona Wottring	Easton	Northa'ton	July 11
5070	Mabel E. Sawyer	Mill Rift	Pike	" 11
5071	Hazel L. Adsit	Con'aut Lake	Crawford	" 14
5072	Ella Dearborn	Conneautville	"	" 14
5073	Orma Gray	Cam. Springs	"	" 14
5074	Joanna McLaughlin	Crossingville	"	" 14
5075	May Ralston	Con'ut Lake	"	" 14
5076	Cecile St. John	Townville	"	" 14
5077	Hazel Waite	Spartansburg	"	" 14
5078	Isabelle Wilson	Meadville R. 12	"	" 14
5079	Viola B. Adams	Duncannon	Perry	" 14
5080	Annie G. Clousen	N. Bloomfield	"	" 14
5081	F. G. Henderson	Sherman's Dale	"	" 14
5082	Geo. Ickes Kell	Saville	"	" 14
5083	Anna E. Collins	Lovelton	Wyoming	" 14
5084	Agnes De Wolf	Jenningsville	"	" 14
5085	M. Lacey Jayne	Laceyville	"	" 14
5086	Adaline Wiggins	Tunkhan'nok 4	"	" 14
5087	F. Barnhart	Claysburg	Blair	" 14
5088	R. E. Blumenstein	Harrisburg	Dauphin	" 15
5089	Zella H. Book	"	"	" 15
5090	Lois K. Booker	"	"	" 15
5091	Estella Ebner	"	"	" 15
5092	Daniel T. Fackler	"	"	" 15
5093	Sara E. Hoke	"	"	" 15
5094	H. Hunt Jackson	"	"	" 15
5095	Rowena M. Kell	"	"	" 15
5096	Grace E. Laucks	"	"	" 15
5097	Ellen E. Luce	"	"	" 15
5098	Edna F. Mann	"	"	" 15
5099	Ruth M. Ossman	"	"	" 15
5100	Mary M. Reed	"	"	" 15
5101	L. M. Sloat	"	"	" 15
5102	Ella S. Yost	"	"	" 15
5103	Julia H. Zudrell	"	"	" 15
5104	Anna Quinn	Dushore	Sullivan	" 18
5105	Lucy D. Farrell	"	"	" 18
5106	Florence Whalen	"	"	" 18
5107	Mary B. Finan	Lopez	"	" 18
5108	Margaret E. Walsh	"	"	" 18
5109	H. M. Bacon	Parke R. 2	York	" 19
5110	John L. Bortner	Hanover R. 4	"	" 19
5111	Harry A. Boyer	York R. 9	"	" 19
5112	Daisy A. Butler	York	"	" 19
5113	W. C. Drawbaugh	Dover	"	" 19
5114	Harry E. Eyster	Thomasville	"	" 19
5115	E. C. Fahringer	Wrightsville R. 2	"	" 19
5116	H. C. Fishel	Seven Valleys	"	" 19
5117	M. Jennie Gable	York	"	" 19
5118	Mazie C. Gable	Red Lion	"	" 19
5119	Winona Greeman	York	"	" 19
5120	Spurgeon E. Hunt	Glen Rock	"	" 19
5121	A. M. Joseph	York N. Salem	"	" 19
5122	J. W. Josebh	"	"	" 19
5123	Mary E. Kayler	York	"	" 19
5124	Jane F. Kell	York	"	" 19
5125	Alverta M. Krout	Seven Valleys	"	" 19
5126	Grace E. McElroy	York	"	" 19
5127	George S. Perry	Dallastown	"	" 19
5128	M. Olive Posey	Mud'y Ck. F'k	"	" 19
5129	Ella J. Robinson	York	"	" 19
5130	Mabel F. Robinson	York	"	" 19
5131	Flora F. Stark	York	"	" 19
5132	Herbert A. Stiles	Dallastown	"	" 19
5133	K. B. Casey	Chester	Delaware	" 21
5134	Ethel F. Clough	Chester	"	" 21
5135	E. G. Dougherty	"	"	" 21
5136	E. M. Kilmore	"	"	" 21
5137	Pearl I. Quimby	"	"	" 21
5138	Jennie F. Roberts	"	"	" 21
5139	A. Isabella Rodgers	"	"	" 21
5140	Elsie G. Rohrman	"	"	" 21
5141	Kate L. Lehman	Ulysses	Potter	" 21
5142	F. M. Morrow	Camptown	"	" 21
5143	Rosa B. Bitner	Beech Creek	Clinton	" 21
5144	Mary M. Potter	Antes Ft. Lyc.	"	" 21
5145	Jacob C. Fox	Mill Hall	"	" 21
5146	N. L. Bartges	Booneville	"	" 21
5147	M. Buchanan	Sinnemahoning	Cameron	" 21
5148	Mabel Edwards	Emporium	"	" 21
5149	Alvira Farr	Emporium	"	" 21
5150	Rose Gayney	Emporium	"	" 21
5151	Emma Bates	S. Sterling	Wayne	" 22
5152	Bessie M. Decker	Beachlake	"	" 22
5153	M. M. Howe	Sterling	"	" 22
5154	M. Kennedy	Pleasant Mt.	"	" 22
5155	Gertrude M. Lee	Sterling	"	" 22
5156	Annie Lawlor	Hawley	"	" 22
5157	Loretta McAvoy	Pleasant Mt.	"	" 22
5158	Margaret Smith	Orson	"	" 22
5159	Rose Farabaugh	Pattun	Cambria	" 29
5160	Eleanor Thomas	Cresson R.D.	"	" 29
5161	M. M. McMullen	Cresson R.D.	"	" 29

No.	Name.	P. O. Address.	County.	Date, 1910.
5162	Lucinda Bradley	Ebensburg	Cambria	July 29
5163	Olive Gore	Johnstown	"	" 29
5164	Iva Varner	Johnstown	"	" 29
5165	Christine Paterick	Hastings	"	" 29
5166	S. Winegardner	Beaverdale	"	" 29
5167	E. C. Seymour	Portage	"	" 29
5168	N. D. Rowland	Nanty Glo	"	" 29
5169	A. J. Lantzy	Spangler	"	" 29
5170	Syl. Lantzy	Carrollt'n R. 1	"	" 29
5171	Ralph Weaver	Scalp Level	"	" 29
5172	C. E. Overberger	Patton	"	" 29
5173	C. L. Farabaugh	Carrolltown	"	" 29
5174	John S. Foley	Elmora	"	" 29
5175	Anne G. Cawley	Pittston	Luzerne	Aug. 8
5176	Alice M. Crooks	Hazleton	"	" 8
5177	Harry W. Croop	Dallas	"	" 8
5178	C. E. Kishbach	Hazleton	"	" 8
5179	Philip P. Kane	Sugar Notch	"	" 8
5180	Lucy Thomas	Wanamie	"	" 8
5181	Jean Taylor	Hazleton	"	" 8
5182	Ruth Terpe	Marion Centre	Indiana	" 9
5183	Minnie Gaston	Rochester M'ls	"	" 9
5184	Nannie T. Gerard	Blairsville	"	" 9
5185	Flo. J. Hileman	Cherry Tree	"	" 9
5186	R. E. McKnight	Arcadia	"	" 9
5187	Janet E. Nesbit	Heilwood	"	" 9
5188	Cora Uncapher	Marion Centre	"	" 9
5189	H. C. Stiteler	Smicksburg	"	" 9
5190	H. E. Lambing	Tanoma	"	" 9
5191	Ina Gilkerson	Saltsburg	"	" 9
5192	Nola Edna Steele	Indiana R. 5	"	" 9
5193	Mary G. Lynch	Rossiter	"	" 9
5194	Anna B. Sutter	R'ester M's R.3	"	" 9
5195	Roxie Kinter	Indiana	"	" 9
5196	Gilbert C. Fee	Robinson	"	" 9
5197	Mrs. Clara White	Blairsville	"	" 9
5198	Esther Bell	Petersburg	Hun'ngdon	" 10
5199	Zada A. Beck	Warriors Mark	"	" 10
5200	E. Baumgardner	Cottage	"	" 10
5201	Myrtle Cline	Rockhill Furn'	"	" 10
5202	F. M. Cramer	Trough Creek	"	" 10
5203	J. A. Chilcoate	Robertsdale	"	" 10
5204	David H. Dell	Mapleton De't	"	" 10
5205	Merretta Forbes	Huntingdon	"	" 10
5206	Doris R. Glasgow	Calvin	"	" 10
5207	Elsie Hall	Huntingdon	"	" 10
5208	Thos. E. Huston	Petersburg	"	" 10
5209	Caroline Isenberg	Huntingdon	"	" 10
5210	Katharine Jackson	Huntingdon	"	" 10
5211	Lacea Kirkpatrick	Shirleysburg	"	" 10
5212	Mary E. Kope	Decorum	"	" 10
5213	Fannie M. Lutz	Shirleysburg	"	" 10
5214	Myrtle E. Pheasant	Orbisonia	"	" 10
5215	Bertha M. Wilson	Three Springs	"	" 10
5216	B. A. Cummings	Shamokin	Northumb.	" 12
5217	Jeannetta Funk	Milton	"	" 12
5218	John Filer	Shamokin	"	" 12
5219	Gertie V. Fisher	Shamokin	"	" 12
5220	F. B. Grebbin	Shamokin	"	" 12
5221	Nettie I. Gulick	Danville R. 7	"	" 12
5222	Myra Hackett	Sunbury	"	" 12
5223	Henry J. Kane	Locust Gap	"	" 12
5224	W. R. Kerstetter	Shamokin R. 1	"	" 12
5225	Anna M. Moore	Shamokin R. 1	"	" 12
5226	James J. McBride	Shamokin	"	" 12
5227	Couldron Mitchell	Shamokin	"	" 12
5228	G. M. Sanders	Elysburg R. 1	"	" 12
5229	Lizzie M. Witmer	Hickory Cor.	"	" 12
5230	Norman G. Binkley	Reinholds	Lancaster	" 16
5231	Rebecca O. Buch	Akron	"	" 16
5232	Helen B. Becker	Manheim	"	" 16
5233	Carrie M. Bixler	Ephrata R. 3	"	" 16
5234	Laura G. Becker	Lititz	"	" 16
5235	Cecelia Charles	West Willow	"	" 16
5236	Verna C. Chandler	Strasburg	"	" 16
5237	Phares B. Gibble	Manheim	"	" 16
5238	Blanche Dalton	Manheim	"	" 16
5239	C. M. Eshleman	Lititz	"	" 16
5240	John L. Gehman	Martindale	"	" 16
5241	Harry E. Goshen	Terre Hill	"	" 16
5242	J. H. Haverstick	Quarryville	"	" 16
5243	Ammon G. Huber	Neffsville	"	" 16
5244	E. G. Minich	Columbia	"	" 16
5245	Katie A. Miller	Ephrata	"	" 16
5246	Martha J. Mowrey	Columbia	"	" 16
5247	Elsie K. Miller	Lititz R. 5	"	" 16
5248	Willis E. Pierce	Brownstown	"	" 16
5249	Marion F. Roop	Christiana	"	" 16
5250	Maud E. Stauffer	Strasburg	"	" 16
5251	Anna K. Shoop	Elizabethtown	"	" 16
5252	Mary Wenzel	East Earl R. 2	"	" 16
5253	H. F. Winters	Rawlinsville	"	" 16
5254	John N. Wissler	Ephrata No. 1	"	" 16
5255	A. T. Winters	Rawlinsville	Lancaster	Aug. 16
5256	Mary Brown	Mercer	Mercer	" 17
5257	Elizabeth Royer	Jamestown	"	" 17
5258	Mary E. Persch	Sharon	"	" 17
5259	Edna Shollenb'ger	Greenville	"	" 17
5260	Nell Hough	Mercer	"	" 17
5261	S. Splitstone	Meadville	"	" 17
5262	H. R. Adams	Indianhead	Fayette	" 17
5263	K. V. Bailey	Vanderbilt	"	" 17
5264	Helen Bierer	Uniontown	"	" 17
5265	Florence Bierer	Uniontown	"	" 17
5266	Audith Bixler	Connellsville	"	" 17
5267	Margaret Boyle	Everson	"	" 17
5268	Maud M. Brooks	Normalville	"	" 17
5269	M. E. Buttermore	Connellsville	"	" 17
5270	Bess Courtney	Connellsville	"	" 17
5271	M. C. Daniels	So. Conne'ville	"	" 17
5272	Mary Fealy	Vanderbilt	"	" 17
5273	M. Ruth Fuller	U. Middletown	"	" 17
5274	J. C. Glassburn	Scottdale	"	" 17
5275	Martha Long	Connellsville	"	" 17
5276	Mary J. Martin	Uniontown	"	" 17
5277	Asa L. Martin	Uniontown	"	" 17
5278	N. O. MacFarland	Scottdale	"	" 17
5279	Pearl Messmore	Uniontown	"	" 17
5280	Nellie Moyer	Dunbar	"	" 17
5281	Lena Mitchell	Ohiopyle	"	" 17
5282	Bridget V. Noon	Brier Hill	"	" 17
5283	E. R. O'Neil	Smithfield	"	" 17
5284	E. J. Ramsier	Perryopolis	"	" 17
5285	Alice S. Robertson	Banning	"	" 17
5286	J. G. Robinson	Smock	"	" 17
5287	Russell R. Ruble	Gans	"	" 17
5288	Josephine Sanner	Farmington	"	" 17
5289	R. A. Snyder	Vanderbilt	"	" 17
5290	Myrtle Springer	Uniontown	"	" 17
5291	Samuel E. Solomon	Indianhead	"	" 17
5292	Mamie Thompson	Star Junction	"	" 17
5293	Mabel L. Woodfill	Smithfield	"	" 17
5294	Vida Cope	Beach Haven	Columbia	" 17
5295	Mary E. Dye	Berwick	"	" 17
5296	Elmira Houck	Catawissa	"	" 17
5297	Ida A. Stamm	Berwick	"	" 17
5298	Callie M. Allen	Parker's La'ng	Butler	" 18
5299	Bessie Black	Chicora	"	" 18
5300	Nannie Black	Chicora	"	" 18
5301	Mayme Graham	Chicora	"	" 18
5302	Gertrude Jack	N. Washington	"	" 18
5303	Ida Jackson	Cochranton	"	" 18
5304	Florence Kennedy	Cabot	"	" 18
5305	H. McCandlass	Prospect R. 4	"	" 18
5306	Bridget McCue	Her'n Station	"	" 18
5307	Winifred McNey	Butler	"	" 18
5308	Myrtle Rupert	Chicora	"	" 18
5309	Florence L. Stamm	Prospect	"	" 18
5310	Elsie B. Wiles	Chicora	"	" 18
5311	Steward Straw	Berwindale	Clearfield	" 18
5312	K. E. Hering	Allemans	"	" 18
5313	Kittie Biddle	New Millport	"	" 18
5314	Kittie Hirst	Du Bois	"	" 18
5315	Hannah E. Bloom	Coalport	"	" 18
5316	Pearl Chilton	Allemans	"	" 18
5317	Orel J. Sloppy	New Millport	"	" 18
5318	Grace Hoyt	Clearfield	"	" 18
5319	Emma Heilbrun	Luthersburg	"	" 18
5320	Orville Wrigley	Clearfield	"	" 18
5321	Margaret Grey	Houtzdale	"	" 18
5322	Jessie Stringfellow	Peale	"	" 18
5323	Mabel Rorabaugh	Mahaffey	"	" 18
5324	Anna Roe Buzard	Kylertown	"	" 18
5325	Mary A. Charlton	Houtzdale	"	" 18
5326	Anna M. Brady	"	"	" 18
5327	Edith Mooney	"	"	" 18
5328	Gertrude Pie	Osceola Mills	"	" 18
5329	Katie McCully	Berwinsdale	"	" 18
5330	Inez Jury	Shawville	"	" 18
5331	Carrie McFadden	Osceola Mills	"	" 18
5332	Edith Ifert	McGees Mills	"	" 18
5333	Mae Weber	Grampian	"	" 18
5334	Grace M. Straw	Clearfield	"	" 18
5335	Minnie E. Simpson	Burgettstown	Washin'on	" 19
6336	Anna M. Crouse	"	"	" 19
5337	Lucy Messenger	Donora	"	" 19
5338	C. M. Zimmerman	Lock No. 4	"	" 19
5339	Frances Keating	Donora	"	" 19
5340	Garnett Ternent	Monongahela	"	" 19
5341	Eva Murray	Washington	"	" 19
5342	A. R. Montgomery	Old Concord	"	" 19
5343	M. B. McBride	Burgettstown	"	" 19
5344	Anna G. Conger	Dunn's Station	"	" 19
5345	Elizabeth Dodd	Wash'ton R. 6	"	" 19
5346	Estella Hawkins	Washington	"	" 19
5347	Hattie Lange	Allenport	"	" 19

No.	Name.	P. O. Address.	County.	Date, 1910.
5348	Adeline S. Welch	Gastonville	Washin'on	Aug. 19
5349	Pearl M. Power	Finleyville	"	" 19
5350	E. J. McCormick	Venetia	"	" 19
5351	A. G. Crumrine	Monongahela	"	" 19
5352	Dorothy Brown	McDonald	"	" 19
5353	Florence McClure	Gastonville	"	" 19
5354	M. E. Wilson	Canonsburg	"	" 19
5355	Blanche De Witte	Midway	"	" 19
5356	E. M. Murchland	Hanlin Station	"	" 19
5357	M. M. Miller	Claysville	"	" 19
5358	Edith McNary	Canonsburg	"	" 19
5359	Jennie L. Patterson	Wash'gton R. 9	"	" 19
5360	John H. Linn	Amity R. 3	"	" 19
5361	G. McWilliams	Canonsburg	"	" 19
5362	J. E. McBurney	Canonsburg	"	" 19
5363	J. E. Hixenbaugh	Washington	"	" 19
5364	Laura M. Sprowle	Claysville	"	" 19
5365	Beatrice Wright	McDonald	"	" 19
5366	E. Hazel Patterson	Monongahela	"	" 19
5367	S. E. Himmeger	Canonsburg	"	" 19
5368	Jennie H. Welch	Houston	"	" 19
5369	Jane Adrian	Allegheny	Allegheny	" 22
5370	Mary Omslaer	"	"	" 22
5371	Roe Safford	"	"	" 22
5372	Lyda J. Barber	"	"	" 22
5373	Mary Black	"	"	" 22
5374	C. E. Batcheler	"	"	" 22
5375	R. M. Black	"	"	" 22
5376	Mary M. Young	"	"	" 22
5377	Carrie Meess	"	"	" 22
5378	Anna Jenkinson	"	"	" 22
5379	Sada C. Coar	"	"	" 22
5380	Margaret Manning	"	"	" 22
5381	Anna J. Krebs	"	"	" 22
5382	E. E. Hazlett	"	"	" 22
5383	M. S. Williamson	"	"	" 22
5384	Jennie M. Allers	Pittsburg	"	" 23
5385	Ida M. Barclay	"	"	" 23
5386	Mary Ellen Brown	"	"	" 23
5387	Edna P. Carson	"	"	" 23
5388	Catherine Clair	"	"	" 23
5389	Eleanor G. Clouse	"	"	" 23
5390	Hanora C. Collins	"	"	" 23
5391	Lenore R. Colwell	"	"	" 23
5392	Hilda M. Davies	"	"	" 23
5393	M. A. Donaldson	"	"	" 23
5394	Jessie M. Durnir	"	"	" 23
5395	Anna E. Edwards	"	"	" 23
5396	Mary E. Edwards	"	"	" 23
5397	Emma E. Evans	"	"	" 23
5398	Anna Friedland	"	"	" 23
5399	Laura M. Friel	"	"	" 23
5400	Anna G. Glasman	"	"	" 23
5401	Agnes G. Graham	"	"	" 23
5402	Agnes L. Gregg	"	"	" 23
5403	Bertha B. Gower	"	"	" 23
5404	Ravena Groat	"	"	" 23
5405	Esther P. Haller	"	"	" 23
5406	Hazel G. Hawkins	"	"	" 23
5407	Myrtle Helgoth	"	"	" 23
5408	S. Ethel Hill	"	"	" 23
5409	Marinna S. Jayme	"	"	" 23
5410	Celia Jones	"	"	" 23
5411	Katherine Kenny	"	"	" 23
5412	E. M. Kester	"	"	" 23
5413	Katherine M. King	"	"	" 23
5414	Pauline Kirwan	"	"	" 23
5415	Eliz. Ledwidge	"	"	" 23
5416	Grace M. Leibhart	"	"	" 23
5417	Martha Lewis	"	"	" 23
5418	Olive W. Linn	"	"	" 23
5419	Ida A. Lockhart	"	"	" 23
5420	Belle Long	"	"	" 23
5421	Margaret Mapes	"	"	" 23
5422	Estelle A. Marks	"	"	" 23
5423	Bertha E. Martin	"	"	" 23
5424	Julia R. Matthews	"	"	" 23
5425	C. J. Milholland	"	"	" 23
5426	Alberta Morrison	"	"	" 23
5427	Clara Morrison	"	"	" 23
5428	M. A. Moldenhauer	"	"	" 23
5429	E. G. McCandless	"	"	" 23
5430	Rietta McCandless	"	"	" 23
5431	Sarah E. McIntosh	"	"	" 23
5432	Margaret Naughten	"	"	" 23
5433	Emma L. Norum	"	"	" 23
5434	Hulda M. Notz	"	"	" 23
5435	H. M. Olnhausen	"	"	" 23
5436	Sarah Patterson	"	"	" 23
5437	Pearl Richardson	"	"	" 23
5438	Eliz. L. Swords	"	"	" 23
5439	Cora C. Ross	"	"	" 23
5440	Katherine Saling	"	"	" 23
5441	Eleanor Scheibler	Pittsburg	Allegheny	Aug. 23
5442	Edna Schlegel	"	"	" 23
5443	Elizabeth Sellers	"	"	" 23
5444	Letitia C. Shannon	"	"	" 23
5445	Julia A. Shourek	"	"	" 23
5446	Ella M. Snoddy	"	"	" 23
5447	Rose Soupcoff	"	"	" 23
5448	H. E. Spelker	"	"	" 23
5449	Emelie M. Spreyer	"	"	" 23
5450	Edith Steffler	"	"	" 23
5451	Nora C. Thoma	"	"	" 23
5452	Margaret Thomas	"	"	" 23
5453	Laura Tilton	"	"	" 23
5454	Charlotte Turner	"	"	" 23
5455	Katherine L. Urban	"	"	" 23
5456	Grace L. Vensel	"	"	" 23
5457	Joseph M. Custer	Shanksville	Somerset	Sept. 12
5458	M. L. Glotfelty	Elk Lick	"	" 12
5459	C. Earl Shaffer	Scalp Level	"	" 12
5460	Lloyd M. Walker	Friedens	"	" 12
5461	P. P. Williamson	Johnstown R. 4	"	" 12
5462	John E. Johnson	Stoystown	"	" 12
5463	Anna Blauser	Nebraska	Forest	" 12
5464	Ethel Douglas	Endeavor	"	" 12
5465	Clo E. Green	West Hickory	"	" 12
5466	Blanche Hendricks	Kellettville	"	" 12
5467	Goldia A. Hill	Tionesta	"	" 12
5468	Augusta Korb	Tionesta	"	" 12
5469	E. C. Terrill	Tylersburg	"	" 12
5470	Milton A. Wolfe	Newmansville	"	" 12
5471	Anna C. Shaub	Lancaster	Lancaster	Oct. 3
5472	Mary C. Ranck	"	"	" 3
5473	Helen E. Hickman	"	"	" 3
5474	Marie Snyder	"	"	" 3
5475	John C. Prindle	North East	Erie	" 10
5476	Lucy N. Allen	"	"	" 10
5477	Mary Allgeier	Waterford R. 3	"	" 10
5478	Louise F. Bach	Erie	"	" 10
5479	Mayme Brogdon	Waterford	"	" 10
5480	E. S. Campbell	Albion	"	" 10
5481	Sarah S. Church	Union City	"	" 10
5482	Anna Crowley	Erie	"	" 10
5483	Marion Derry	Erie	"	" 10
5484	Ruth Eichenlaub	Erie	"	" 10
5485	Edna Fry	Erie	"	" 10
5486	Flo. M. Gourley	Erie	"	" 10
5487	Lena Herbst	Erie	"	" 10
5488	Louise H. Hewitt	E. Springfield	"	" 10
5489	Emma Marie Hull	Erie	"	" 10
5490	Ella I. Johnson	Mill Village	"	" 10
5491	Emma Klingel	Erie	"	" 10
5492	Alice B. Leet	Moorheadville	"	" 10
5493	Florence E. Lewis	E. Springfield	"	" 10
5494	Mary McDonnell	Waterford	"	" 10
5495	Marion Miller	Erie	"	" 10
5496	A. B. Moershfelder	Erie	"	" 10
5497	Anna E. Robinson	Erie	"	" 10
5498	Clara E. Roth	Erie	"	" 10
5499	Leona Suttelle	Erie	"	" 10
5500	Frances Walbridge	E. Springfield	"	" 10
5501	Mabel Young	Erie	"	" 10
5502	Carrie S. Hershey	Mountville	Lancaster	" 14
5503	E. Bechsteadt	McKeesport	Allegheny	Nov. 2
5504	Bess Moses	McKeesport	"	" 2
5505	E. McCaughan	McKeesport	"	" 2
5506	Bess Nan	McKeesport	"	" 2
5507	M. Hinchman	McKeesport	"	" 2
5508	Mary J. Conwell	Cyclone	McKean	" 12
5509	Edith Dobie	Bradford	"	" 12
5510	Ella Falconer	Mt. Jewett	"	" 12
5511	Katharine Fay	Smethport	"	" 12
5512	Flora C. Fisher	Bradford	"	" 12
5513	Mabel E. Grow	Bradford	"	" 12
5514	Genevieve Partiss	Bradford	"	" 12
5515	Etolle Rice	Eldred	"	" 12
5516	Mary A. Roche	Bradford	"	" 12
5517	Nettie A. Russell	Duke Centre	"	" 12
5518	Nelle M. Shea	Mt. Alton	"	" 12
5519	Helen M. Smith	Bradford	"	" 12
5520	Nellie H. Sonbergh	Bradford	"	" 12
5521	Nettie Muzzy	Springville	Susq'anna	Dec. 7
5522	Mary O'Connell	St. Josephs	"	" 7
5523	Mollie Griffin	St. Josephs	"	" 7
5524	Jessie M. Hastings	Montrose	"	" 7
5525	Mattie F. Lyon	Wyalusing	"	" 7
5526	Elizabeth Dawson	Moosic	Lack'anna	" 16
5527	Katie Donnelly	Olyphant	"	" 16
5528	Margaret Gordon	Carbondale	"	" 16
5529	Nellie Lenahan	Olyphant	"	" 16
5530	Martha Nolan	Scranton	"	" 16
5531	Nellie McAndrew	Olyphant	"	" 16
5532	Gertrude Weaver	Olyphant	"	" 16
5533	Ida White	Carbondale	"	" 16